

Northwest Atlantic



Fisheries Organization

Serial No. N1725

NAFO SCS Doc. 90/06

SCIENTIFIC COUNCIL MEETING - JUNE 1990

Provisional Index and List of Titles of Research
and Summary Documents for 1989

by

NAFO Secretariat

CONTENTS

	Page
Introduction	1
List of Titles	3
Subject Index	11
Author Index	21

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 provisional indexes for 1985, 1986, 1987 and 1988 were issued as NAFO SCS Doc. 86/7 (Serial No. N1118), NAFO SCS Doc. 87/2 (Serial No. N1282), NAFO SCS Doc. 88/9 (Serial No. N1436) and NAFO SCS Doc. 89/11 (Serial No. N1588) respectively. The current provisional index relates to all SCR documents (No. 1-98) and SCS documents (No. 1-22) for the calendar year 1989.

The list of SCR and SCS documents for 1989 in the first section of this document maintains the previous format and is arranged by consecutive document number.

Compilation of the 1989 author index generally follows guidelines that were used in preparing the Index of Meeting Documents for 1979-84. Each of the research and summary documents is identified by its 3-character code (i.e. SCR or SCS), following by the last two digits of the year of issue, and 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 1989 subject index follows that 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.

LIST OF RESEARCH AND SUMMARY DOCUMENTS, 1989

RESEARCH DOCUMENTS (SCR)

<u>Doc. #</u>	<u>Ser. #</u>	
89/01	N1565	<u>AUSTER, P. J., R. MALATESTA, and B. HASKELL.</u> Bivalves as model organisms to elucidate patterns of predation. (12 pages)
89/02	N1566	<u>TIZOL, R.</u> Fishery and biological aspects of silver hake (<i>Merluccius bilinearis</i>) in Div. 4W, 1986-87. (11 pages)
89/03	N1567	<u>STEIN, M., and E. BUCH.</u> Are subsurface ocean temperatures predictable at Fylla Bank/West Greenland? (14 pages)
89/04	N1568	<u>PETROV, V. N., and S. V. CHECHENIN.</u> Results from acoustic capelin surveys in NAFO Div. 3KLNO in spring 1988. (6 pages)
89/05	N1569	<u>BULATOVA, A. Yu., S. A. KUZMIN, V. N. PETROV, and S. V. RATUSHNY.</u> Assessment of cod stock in the NAFO Subarea 3 based on the 1988 trawl-acoustic survey data. (23 pages)
89/06	N1570	<u>VASKOV, A. A., G. B. RUDNEVA, and I. A. OGANIN.</u> Estimation of the stock status and TAC for redfish in Div. 3M and 3LN for 1990. (23 pages)
89/07	N1571	<u>KUZMIN, S. A.</u> Estimation of witch stock in Div. 3LNO according to the data on 1983-88 trawl surveys. (9 pages)
89/08	N1572	<u>SAVVATIMSKY, P. I.</u> Dynamics of roundnose grenadier catch in the Northwest Atlantic. (11 pages)
89/09	N1573	<u>ALBIKOVSKAYA, L. K., and O. V. GERASIMOVA.</u> Feeding and food interrelations between cod (<i>Gadus morhua morhua</i> L.) and beaked redfish (<i>Sebastes mentella</i> T.) on Flemish Cap. (15 pages)
89/10	N1574	<u>BOROVKOV, V. A., and I. I. TEVS.</u> Overview of oceanographic conditions off the Northwest Atlantic in 1988. (16 pages)
89/11	N1579	<u>HUNT, J. J.</u> Results of a silver hake otolith exchange between Canada and the USSR. (5 pages)
89/12	N1580	<u>RIKHTER, V. A., and V. V. PETEROPSH.</u> On the question of optimum numbers of ageing the Scotian Shelf silver hake. (11 pages)
89/13	N1581	<u>BECK, P. C., E. G. DAWE, and J. DREW.</u> An update of the fishery for short-finned squid (<i>Illex illecebrosus</i>) in the Newfoundland area during 1986-88 with descriptions of some biological characteristics and temperature trends. (16 pages)
89/14	N1590	<u>RIKHTER, V. A.</u> Preliminary assessment of the Scotian Shelf silver hake stock size (Div. 4VWX) for 1988 and prospects for 1990. (11 pages)
89/15	N1591	<u>RIKHTER, V. A.</u> On the change of total and fishing mortality rate for older silver hake age-groups in Div. 4VWX by fishing period. (4 pages)
89/16	N1592	<u>RIKHTER, V. A., and V. F. TUROK.</u> Distribution of silver hake, other fish species and squid in 1988 on the Scotian Shelf Slopes from data obtained by USSR observers. (17 pages)

- 89/17 N1593 FUONG, N. On rates of linear and weight growth of Scotian silver hake (*Merluccius bilinearis* Mitch.). (13 pages, revised)
- 89/18 N1594 SMEDSTAD, O. M., and S. TORHEIM. Norwegian investigations on shrimp (*Pandalus borealis*) in East Greenland waters in 1988. (12 pages)
- 89/19 N1595 SMEDSTAD, O. M. Preliminary report of a cruise with M/T "Håkøy-II" to East Greenland waters in September 1988. (11 pages)
- 89/20 N1596 PEDERSEN, S. A. Inshore scallop resources, *Chlamys islandica*, in the Nuuk Area West Greenland. (16 pages)
- 89/21 N1597 NYGAARD, K. H., K. M. LEHMANN, and H. HOVGÅRD. Young cod distribution and abundance in West Greenland inshore areas, 1988. (6 pages)
- 89/22 N1598 HOVGÅRD, H., and F. RIGET. An estimation of the size of the 1984 year-class of cod off West Greenland from CPUE data in the trawl fisheries. (9 pages)
- 89/23 N1599 RIGET, F., and H. HOVGÅRD. Expected length distribution of cod in West Greenland waters, 1989-91. (5 pages)
- 89/24 N1600 RIGET, F., and H. HOVGÅRD. Recaptures by year-class of cod in East Greenland/Icelandic waters from tagging experiments at West Greenland. (7 pages)
- 89/25 N1601 RIGET, F., and J. BOJE. An analysis of meristic characters of Greenland halibut (*Reinhardtius hippoglossoides* W.) in the Northwest Atlantic. (11 pages)
- 89/26 N1602 BOJE, J., F. RIGET, and V. SIMONSEN. An analysis of genetic differentiation in Greenland halibut (*Reinhardtius hippoglossoides* W.) in the Northwest Atlantic. (8 pages)
- 89/27 N1603 BOJE, J., and F. RIGET. The fishery for Greenland halibut in Subarea 1. (8 pages)
- 89/28 N1604 PARSONS, D. G., and P. J. VEITCH. Observations on the new Canadian fishery for shrimp (*Pandalus borealis*) in NAFO Division 0B in 1988. (11 pages)
- 89/29 N1605 PARSONS, D. G., and P. J. VEITCH. The Canadian fishery for northern shrimp (*Pandalus borealis*) in Division 0A, 1988. (12 pages)
- 89/30 N1607 YATSU, A., and O. JØRGENSEN. West Greenland groundfish biomasses estimated from a stratified-random trawl survey in 1988. (7 pages)
- 89/31 N1606 YATSU, A., and O. JØRGENSEN. Distribution, abundance, size, age, gonad index and stomach contents of Greenland halibut (*Reinhardtius hippoglossoides*) off West Greenland in September/October 1988. (12 pages)
- 89/32 N1608 HOVGÅRD, H., F. RIGET, and H. LASSEN. Modelling cod migration from Greenland to Iceland. (18 pages)
- 89/33 N1609 HOVGÅRD, H., H. LASSEN, K. M. LEHMANN, K. NYGAARD, and F. RIGET. Distribution and abundance of the inshore component of the West Greenland cod stock in autumn 1988. (12 pages)
- 89/34 N1610 BAIRD, J. W., and C. A. BISHOP. Estimates of biomass and age compositions for that portion of the Division 2J+3KL cod stock beyond the Canadian 200-mile fishery zone. (11 pages)

- 89/35 N1611 BAIRD, J. W., and C. A. BISHOP. The assessment of the cod stock in NAFO Div. 3NO. (61 pages)
- 89/36 N1613 SKÚLADÓTTIR, U. A review of the shrimp fishery, *Pandalus borealis*, in Denmark Strait. (14 pages)
- 89/37 N1614 BRODIE, W. B., and W. R. BOWERING. An assessment update for the American plaice stock in Divisions 3LNO. (62 pages)
- 89/38 N1615 LUND, H. Greenland fishery for shrimp (*Pandalus borealis* Kr.) in NAFO Division 1A, (Greenland Management Areas NV1 and NV2) in 1988. (19 pages)
- 89/39 N1616 LEHMANN, K. Report on commercial trial fishery for shrimp at East Greenland in 1987. (10 pages)
- 89/40 N1617 CARLSSON, D. M., and P. KANNEWORFF. Report on a stratified-random trawl survey for shrimp (*Pandalus borealis*) in NAFO Subareas 0+1 in July 1988. (16 pages)
- 89/41 N1618 PEDERSEN, S. A., and K. LEHMANN. By-catch of redfish and Greenland halibut in the shrimp fishery off West Greenland, 1988. (12 pages)
- 89/42 N1619 BOJE, J., F. RIGET, and W. R. BOWERING. Results of the 1986, 1987 and 1989 Greenland-Canada Greenland halibut otolith exchange. (3 pages)
- 89/43 N1620 NAKASHIMA, B. S., and R. W. HARNUM. The inshore capelin fishery in NAFO Div. 3L in 1988. (12 pages)
- 89/44 N1621 NAKASHIMA, B. S. Capelin school surface area index for NAFO Div. 3L in 1988. (6 pages)
- 89/45 N1622 JAVIER PAZ CANALEJO, F., F. JAVIER VAZQUEZ ALVAREZ, ANXO FERNANDEZ ARROYO, J. MIGUEL CASAS SANCHEZ and ENRIQUE DE CARDENAS. The feeding of American plaice (*Hippoglossoides platessoides*), redfish (*Sebastes marinus*) and cod (*Gadus morhua*) in the Flemish Cap during July, 1988. (15 pages)
- 89/46 N1624 WALSH, S. J. The fish capture process of a groundfish survey trawl. (15 pages)
- 89/47 N1625 WALSH, S. J., C. COOPER, and W. HICKEY. Trouser trawl method of studying selectivity of American plaice: square vs diamond mesh codends. (13 pages)
- 89/48 N1626 WALDRON, D. E., M. C. BOURBONNAIS, and M. A. SHOWELL. Size of the Scotian Shelf silver hake population in 1988 with projections to 1990. (36 pages)
- 89/49 N1627 HORSTED, Sv. Aa. Status of Subarea 1 cod and the fisheries. (20 pages)
- 89/50 N1628 SKÚLADÓTTIR, U. The Icelandic shrimp fishery (*Pandalus borealis*) in Denmark Strait. (6 pages)
- 89/51 N1630 MESSTORFF, J., AND H. P. CORNUS. Survey biomass and abundance estimates for redfish (*Sebastes marinus* and *S. mentella*) off West Greenland (NAFO Subarea 1), 1982-88, and off East Greenland (ICES Div. XIV.b), 1980-88. (12 pages)
- 89/52 N1631 MILLER, D. S., and J. E. CARSCADDEN. Biomass estimates from two hydroacoustic surveys for capelin (*Mallotus villosus*) in NAFO Divisions 3L and 3N and observations of the Soviet fishery for capelin in Divisions 3NO. (15 pages + addendum)

- 89/53 N1633 CARLSSON, D. M., and P. KANNEWORFF. The shrimp fishery in NAFO Subarea 1 in 1988. (30 pages)
- 89/54 N1634 ATKINSON, D. B., and D. POWER. Redfish in NAFO Divisions 3LN. (26 pages)
- 89/55 N1635 ATKINSON, D. B., and D. POWER. An update on the status of roundnose grenadier in NAFO Subareas 0+1 and 2+3. (26 pages)
- 89/56 N1636 POWER, D., and D. B. ATKINSON. Status of redfish in NAFO Div. 3M. (12 pages)
- 89/57 N1637 STEIN, M. Scales of variability in West Greenland waters. (7 pages)
- 89/58 N1638 STEIN, M., and G. WEGNER. Recent observations on the deep waters off West Greenland. (15 pages)
- 89/59 N1639 JOSSI, J. W., and D. E. SMITH. Continuous plankton records: Massachusetts to Cape Sable, Nova Scotia, and New York to the Gulf Stream, 1988. (19 pages)
- 89/60 N1640 VAZQUEZ, A. Results from bottom-trawl survey of Flemish Cap in July 1988. (15 pages)
- 89/61 N1641 BOWERING, W. R., and W. B. BRODIE. An evaluation of the status of the Greenland halibut resource in NAFO Subarea 2 and Divisions 3K and 3L. (20 pages)
- 89/62* N1642 NOSKOV, A. S. Peculiarities of recruitment to herring stocks in the Northwest Atlantic as exemplified by the strong 1970 year-classes. (2 pages)
- 89/63 N1643 STROUT, G. A. Variation in the shelf water front position in 1988 from Georges Bank to Cape Hatteras. (9 pages)
- 89/64 N1644 SANO, M. H., and C. P. FAIRFIELD. Anticyclonic warm-core Gulf Stream rings off the northeastern United States during 1988. (19 pages)
- 89/65 N1645 BENWAY, R. L. Water column thermal structure across the shelf and slope southeast of Sandy Hook, New Jersey in 1988. (11 pages)
- 89/66 N1646 KEELEY, J. R. Marine environmental data service report for 1988. (14 pages)
- 89/67 N1647 TRITES, R. W., and K. F. DRINKWATER. Overview of environmental conditions in the Northwest Atlantic in 1988. (25 pages)
- 89/68 N1648 BRODIE, W. B., S. J. WALSH, and W. R. BOWERING. An assessment of the yellowtail flounder stock in Div. 3LNO. (37 pages)
- 89/69 N1649 HOVGÅRD, H. On the estimation on stock size and mortality of the Subarea 1 cod from swept-area estimates of abundance. (6 pages)
- 89/70 N1650 CARLSSON, D. M., and P. KANNEWORFF. The commercial shrimp fishery in Denmark Strait in 1988. (21 pages)
- 89/71 N1651 WALSH, S. J. Distribution of juvenile American plaice on the Grand Bank, NAFO Divisions 3LNO. (15 pages)
- 89/72* N1653 PAZ, J., and M. G. LARRAÑETA. Cod in Div. 3NO: year-class variations and the abundance of other commercial fish. (9 pages)
- 89/73 N1654 REIMER, L. W., and P. ERNST. Results of parasitological investigations as an index of stock delimitations concerning occurrences of Greenland halibut (*Reinhardtius hippoglossoides* Walb.) in the Northwest Atlantic. (8 pages)

- 89/74* N1655 MESSIEH, S. N. Changes in the Gulf of St. Lawrence herring populations in the past three decades. (47 pages)
- 89/75* N1656 GOMES, M. C., J. C. RICE, and R. HAEDRICH. Fish assemblages on the Grand Bank of Newfoundland. (32 pages)
- 89/76* N1660 MURAWSKI, S. A., and J. S. IDOINE. Multispecies size composition: a conservative property of exploited fishery systems? (12 pages)
- 89/77* N1661 GABRIEL, W. L. Persistence in northwestern demersal fish assemblages. (17 pages)
- 89/78* N1662 FOGARTY, M. J., R. K. MAYO, F. M. SERCHUK, and F. P. ALMEIDA. Trends in aggregate fish biomass and production on Georges Bank. (23 pages)
- 89/79* N1663 BRODIE, W. Analysis of catches of American plaice, cod, and yellowtail flounder from research vessel surveys on the Tail of the Grand Bank from 1971 to 1989. (24 pages)
- 89/80* N1664 WELLS, R., and J. W. BAIRD. Fish populations on the Flemish Cap. (40 pages)
- 89/81* N1665 WALDRON, D. E. Cannibalism in the Scotian Shelf silver hake population and how it may influence population status. (37 pages)
- 89/82* N1666 PEZZACK, D. S. Lobster (*Homarus americanus*) abundance in the Canadian Maritimes over the last 30 years, an example of extremes. (15 pages)
- 89/83* N1667 TROYANOVSKY, F. M. On nature of non-maturing redfish (*Sebastes mentella* Travin) in the Northwest Atlantic. (3 pages)
- 89/84* N1668 BAIDALINOV, A. P. On the influence of long-term changes of environmental factors on the state of some fish population stocks in the Northwest Atlantic. (16 pages)
- 89/85* N1669 SIGAEV, I. K. On possible causes of the Scotian silver hake abundance fluctuations. (5 pages)
- 89/86* N1670 SEREBRYAKOV, V. P., A. K. CHUMAKOV, and I. I. TEVS. Spawning stock, population fecundity and year-class strength of Greenland halibut from the Northwest Atlantic in 1969-1988. (13 pages)
- 89/87* N1671 BOROVKOV, V. A., A. Yu. BULATOVA, A. K. CHUMAKOV, P. I. SAVVATIMSKY, and I. I. TEVS. Bottom water effects on the distribution and density of bottom fish in NAFO Subarea 3. (16 pages)
- 89/88 N1674 BERTRAND, J., and R. NOÉ. Yield-per-recruit of American plaice in Div. 3LNO. (4 pages)
- 89/89 N1689 ANDERSON, P. J. Estimates of age, growth, and mortality of an Alaskan stock of *Pandalus borealis* Kröyer. (22 pages)
- 89/90 N1690 BERGSTRÖM, B. I. Preliminary results on growth and age determination of *Pandalus borealis* (Kröyer) in periodically enclosed fjord populations. (11 pages)
- 89/91 N1691 BOUTILIER, J., D. A. FOURNIER, and J. R. SIBERT. An application of the MULTIFAN method for estimating growth parameters and age composition from multiple length frequency samples to the pink shrimp (*Pandalus jordani*). (22 pages)
- 89/92 N1692 MOHN, R. K., and L. SAVARD. Length based population analysis of Sept-Iles shrimp (Gulf of St. Lawrence). (12 pages, revised)
- 89/93 N1693 PARSONS, D. G., and L. SAVARD. Some observations on modal analysis of shrimp length frequency distributions. (6 pages)

- 89/94 N1694 SAVARD, L., D. G. PARSONS, and D. M. CARLSSON. Age and growth of northern shrimp (*Pandalus borealis*) in Davis Strait (NAFO SA 0+1). (14 pages)
- 89/95 N1704 SCHICK, D.F., S. CLARK, P. DIODATI, D. GROUT, and D. K. STEVENSON. The Gulf of Maine northern shrimp stock: current research initiatives and assessment. (18 pages)
- 89/96 N1698 SKÚLADÓTTIR, U., G. S. BRAGASON, and V. HELGASON. The stock size of *Pandalus borealis* in Ísafjarðardjúp, estimated by VPA and area swept. (18 pages, revised)
- 89/97 N1695 SIMARD, Y., and L. SAVARD. A multivariate approach to study the variability and structure of length-frequency distributions: an example with the Gulf of St. Lawrence northern shrimp population. (7 pages)
- 89/98 N1696 TERCEIRO, M., and J. S. IDOINE. A practical assessment of the performance of Shepherd's length composition analysis (SRLCA): application to Gulf of Maine northern shrimp (*Pandalus borealis*) survey data. (36 pages)

* Special Session Papers - September 6-8, 1989

SUMMARY DOCUMENTS (SCS)

- | <u>Doc. #</u> | <u>Ser. #</u> | |
|---------------|---------------|--|
| 89/01 | N1575 | <u>MEYBOOM, P.</u> Canadian request for scientific advice on management in 1990 of certain stocks in Subareas 0 to 4. (1 page) |
| 89/02 | N1576 | <u>PAULSEN, J.</u> Denmark (Greenland) request for scientific advice on management of certain stocks in 1990. (2 pages) |
| 89/03 | N1577 | <u>GALLAGHER, E.</u> EEC request for scientific advice on management of certain stocks in 1990. (1 page) |
| 89/04 | N1578 | <u>BOYAR, H. C., and F. M. SERCHUK.</u> United States research report for 1988. (14 pages) |
| 89/05 | N1582 | <u>SCOTT, J. S., L. W. COADY, G. M. HARE, and A. FRÉCHET.</u> Canadian research report, 1988. (24 pages) |
| 89/06 | N1583 | <u>NAFO SECRETARIAT.</u> Tagging activities reported for the Northwest Atlantic in 1988. (4 pages) |
| 89/07 | N1584 | <u>NAFO SECRETARIAT.</u> Historical catches of selected species by stock area and country for the period 1977-87. (38 pages) |
| 89/08 | N1585 | <u>CHUMAKOV, A. K., V. A. RIKHTER, and I. K. SIGAEV.</u> USSR research report for 1988. (23 pages) |
| 89/09 | N1586 | <u>PACIORKOWSKI, A. J.</u> Polish research report, 1988. (12 pages) |
| 89/10 | N1587 | <u>NAFO SECRETARIAT.</u> List of biological sampling data for 1987. (49 pages) |
| 89/11 | N1588 | <u>NAFO SECRETARIAT.</u> Provisional index and list of titles of research and summary documents for 1988. (20 pages) |

- 89/12 N1589 NAFO SECRETARIAT. Notes on statistical activities and publications since June 1988. (2 pages)
- 89/13 N1612 UOZUMI, Y. Japanese research report for 1988. (3 pages)
- 89/14 N1623 PEDERSEN, S. A. Denmark (Greenland) research report for 1988. (9 pages)
- 89/15 N1629 GODINHO, M. L. Portuguese research report for 1988. (12 pages)
- 89/16 N1632 VAZQUEZ A., and G. P. GANDARAS. Spanish research report for 1988. (10 pages)
- 89/17 N1652 NAFO. Provisional Report of Scientific Council, June 1989 Meeting. (147 pages + corrigendum)
- 89/18 N1659 NAFO EXECUTIVE SECRETARY. Sections of the Convention relevant to reporting statistics separately for waters within the Regulatory Area and for Convention waters under Coastal State jurisdiction. (2 pages)
- 89/19 N1676 ERNST, P., and R. EGGERS. German Democratic Republic research report for 1988. (16 pages)
- 89/20 N1685 NAFO. Report of Scientific Council, Annual Meeting, September 1989. (28 pages)
- 89/21 N1699 NAFO SECRETARIAT. Provisional nominal catches in the Northwest Atlantic, 1988. (44 pages)
- 88/22 N1700 PARSONS, D. G. Report of the Working Group on progress in age determination of *Pandalus*. (6 pages)



SUBJECT INDEX

(A)

Abundance

- SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 7 (witch stock in Div. 3LNO from 1983-88 trawl data)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
 15 (total, fishing mortality rate, Div. 4VMX S. hake)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 31 (G. halibut distribution and biology W Greenland)
 33 (cod distribution and abundance, W Greenland 1988)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 51 (redfish biomass, abundance est. E & W Greenland)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 69 (swept-area est. stock size and mortality, cod SA1)
 72 (cod in Div. 3NO and abundance of other fish)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 85 (causes of Scotian S. hake abundance fluctuations)
 86 (G. halibut stock, fecundity, NW Atlantic 1969-88)
 87 (bottom water effects on SA 3 fish distr. density)
 89 (age, growth, mortality, Alaskan stock of shrimp)
 92 (population analysis by shrimp length, Div. 4S)
 95 (G. of Maine shrimp stock: research and assessment)

Acoustics

- SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)

Adaptive framework (ADAPT)

- SCR 89/ 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 69 (swept-area est. stock size and mortality, cod SA1)

Age; ageing

- SCR 89/ 11 (Canada-USSR S. hake otolith exchange results)
 12 (optimum numbers for ageing Div. 4VMX S. hake)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 90 (growth, ageing of fjord populations of shrimp)
 92 (population analysis by shrimp length, Div. 4S)
 93 (modal analysis of shrimp length frequency distr.)
 94 (age and growth of shrimp in Davis Strait)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 SCS 89/ 22 (report of working group on ageing *Pandalus*)

Age, composition

- SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 8 (NW Atlantic roundnose grenadier catch dynamics)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
 15 (total, fishing mortality rate, Div. 4VMX S. hake)
 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 23 (cod length distribution in W Greenland 1989-91)
 24 (cod in E Greenland from taggings in W Greenland)
 25 (meristics analysis of G. halibut in NW Atlantic)
 27 (fishery for G. halibut in SA 1)
 31 (G. halibut distribution and biology W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 33 (cod distribution and abundance, W Greenland 1988)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 43 (inshore capelin fishery in Div. 3L in 1988)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 49 (status of SA 1 cod and the fisheries)
 51 (redfish biomass, abundance est. E & W Greenland)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 69 (swept-area est. stock size and mortality, cod SA1)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 72 (cod in Div. 3NO and abundance of other fish)
 74 (changes in G. of St Lawrence herring in past 30 yr)
 91 (MULTIFAN method est. growth, age on pink shrimp)

- SCR 89/ 92 (population analysis by shrimp length, Div. 4S)
 94 (age and growth of shrimp in Davis Strait)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 98 (Shepherd length analysis: G. of Maine shrimp data)

American lobster (see Lobster, American)American plaice (see Plaice, American)Assessment

- SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 49 (status of SA 1 cod and the fisheries)
 54 (redfish in Div. 3LN)
 56 (status of redfish in Div. 3M)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 88 (yield-per-recruit of A. plaice in Div. 3LNO)
 95 (G. of Maine shrimp stock: research and assessment)
 SCS 89/ 1 (Canadian request for scientific advice for 1990)
 2 (Denmark (Greenland) request for 1990 sci advice)
 3 (EEC request for scientific advice for 1990)

Atlantic cod (see Cod, Atlantic)Atlantic halibut (see Halibut, Atlantic)Atlantic herring (see Herring, Atlantic)Atlantic mackerel (see Mackerel, Atlantic)Atlantic Ocean, North (also Arctic)

- SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 73 (stock delimits by parasites, G. halibut NW Atl.)

Atlantic Ocean, Northwest

- SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)
 10 (overview of oceanography off NW Atlantic in 1988)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 62 (recruitment to herring stocks in NW Atlantic)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 73 (stock delimits by parasites, G. halibut NW Atl.)
 77 (persistence in NW demersal fish assemblages)
 82 (lobster abundance extremes, E Canada last 30 yr)
 83 (nature of non-maturing redfish in NW Atlantic)
 84 (environmental changes on NW Atlantic fish stocks)
 85 (causes of Scotian S. hake abundance fluctuations)
 86 (G. halibut stock, fecundity, NW Atlantic 1969-88)
 SCS 89/ 1 (Canadian request for scientific advice for 1990)
 5 (Canadian research report for 1988)
 6 (tagging activities reported for 1988)
 7 (historical catches for some stocks, 1977-87)
 8 (USSR research report for 1988)
 9 (Polish research report, 1988)
 10 (list of biological sampling data for 1987)
 13 (Japanese research report for 1988)
 18 (sections of Convention re reporting statistics)
 19 (GDR research report for 1988)
 21 (provisional nominal catches for 1988)

Atlantic redfish (see Redfish, Atlantic)Atmosphere

- SCR 89/ 3 (ocean temperature predictability at W Greenland)
 10 (overview of oceanography off NW Atlantic in 1988)
 57 (scales of variability in W Greenland waters)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 67 (overview of NAFO environmental conditions, 1988)

(B)

Baffin Island (Subarea 0)

- SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)

SUBJECT INDEX

- SCR 89/ 31 (G. halibut distribution and biology W Greenland)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 57 (scales of variability in W Greenland waters)
 66 (MEDS environmental report for 1988)
 83 (nature of non-maturing redfish in NW Atlantic)
 94 (age and growth of shrimp in Davis Strait)

Biochemical analysis

- SCR 89/ 26 (genetics analysis of G. halibut in NW Atlantic)

Biological surveys (see Surveys, biological)Biomass (also see Abundance)

- SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 7 (witch stock in Div. 3LNO from 1983-88 trawl data)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 20 (inshore scallop resources in W Greenland)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 39 (commercial trial shrimp fishery, E Greenland 1987)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 48 (S hake population size Div. 4VWX 1988, proj. 1990)
 51 (redfish biomass, abundance est. E & W Greenland)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 72 (cod in Div. 3NO and abundance of other fish)
 76 (multispecies size composition: exploited fishery)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)
 84 (environmental changes on NW Atlantic fish stocks)
 86 (G. halibut stock, fecundity; NW Atlantic 1969-88)
 87 (bottom water effects on SA 3 fish distr. density)

Bivalve

- SCR 89/ 1 (bivalves as model for predation patterns)
 20 (inshore scallop resources in W Greenland)

By-catch

- SCR 89/ 9 (NW Atlantic roundnose grenadier catch dynamics)
 16 (S. hake, other fish, squid in Div. 4VWX in 1988)
 18 (Norwegian shrimp study in E Greenland, 1988)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 49 (status of SA 1 cod and the fisheries)
 53 (shrimp fishery in SA 1 in 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 70 (shrimp fishery in Denmark Strait in 1988)
 95 (G. of Maine shrimp stock: research and assessment)

(C)

Canada

- SCR 89/ 11 (Canada-USSR S. hake otolith exchange results)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 82 (lobster abundance extremes, E Canada last 30 yr)
 SCS 89/ 1 (Canadian request for scientific advice for 1990)
 5 (Canadian research report for 1988)

Cape Hatteras

- SCR 89/ 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 67 (overview of NAFO environmental conditions, 1988)

Capelin (*Mallotus villosus*)

- SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
 31 (G. halibut distribution and biology W Greenland)
 43 (inshore capelin fishery in Div. 3L in 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)

Catch; catch/effort

- SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)

- SCR 89/ 12 (optimum numbers for ageing Div. 4VWX S. hake)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
 15 (total, fishing mortality rate, Div. 4VWX S. hake)
 16 (S. hake, other fish, squid in Div. 4VWX in 1988)
 18 (Norwegian shrimp study in E Greenland, 1988)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 27 (fishery for G. halibut in SA 1)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 33 (cod distribution and abundance, W Greenland 1988)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 36 (review of shrimp fishery in Denmark Strait)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 38 (Greenland shrimp fishery in Div. 3A in 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 48 (S hake population size Div. 4VWX 1988, proj. 1990)
 49 (status of SA 1 cod and the fisheries)
 50 (Icelandic shrimp fishery in Denmark Strait)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 53 (shrimp fishery in SA 1 in 1988)
 54 (redfish in Div. 3LN)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 56 (status of redfish in Div. 3M)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 69 (swept-area est. stock size and mortality, cod SA1)
 70 (shrimp fishery in Denmark Strait in 1988)
 74 (changes in G. of St Lawrence herring in past 30 yr)
 75 (fish assemblages on the Grand Bank)
 76 (multispecies size composition: exploited fishery)
 78 (aggregate fish biomass, production: Georges Bank)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 81 (cannibalism on S hake population-status, Div. 4VWX)
 82 (lobster abundance extremes, E Canada last 30 yr)
 87 (bottom water effects on SA 3 fish distr. density)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 90 (growth, ageing of fjord populations of shrimp)
 95 (G. of Maine shrimp stock: research and assessment)
 96 (Iceland shrimp stock size est. by VFA, area swept)
 SCS 89/ 7 (historical catches for some stocks, 1977-87)
 21 (provisional nominal catches for 1988)

Cod Atlantic (*Gadus morhua*)

- SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 9 (food-feeding between cod and redfish, Flemish Cap)
 16 (S. hake, other fish, squid in Div. 4VWX in 1988)
 21 (young cod inshore distribution, W Greenland 1988)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 23 (cod length distribution in W Greenland 1989-91)
 24 (cod in E Greenland from taggings in W Greenland)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 33 (cod distribution and abundance, W Greenland 1988)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 46 (fish capture process of groundfish survey trawl)
 47 (A. plaice selectivity: square vs diamond codends)
 49 (status of SA 1 cod and the fisheries)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 69 (swept-area est. stock size and mortality, cod SA1)
 72 (cod in Div. 3NO and abundance of other fish)
 78 (aggregate fish biomass, production: Georges Bank)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 84 (environmental changes on NW Atlantic fish stocks)
 87 (bottom water effects on SA 3 fish distr. density)

Cohort analysis (see Sequential population analysis)Commercial fisheries

- SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
 15 (total, fishing mortality rate, Div. 4VWX S. hake)
 16 (S. hake, other fish, squid in Div. 4VWX in 1988)
 17 (linear and weight growth rates, Div. 4VWX S. hake)
 18 (Norwegian shrimp study in E Greenland, 1988)
 20 (inshore scallop resources in W Greenland)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 23 (cod length distribution in W Greenland 1989-91)
 27 (fishery for G. halibut in SA 1)

SUBJECT INDEX

SCR 89/ 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 35 (assessment of cod stock in Div. 3NO)
 36 (review of shrimp fishery in Denmark Strait)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 38 (Greenland shrimp fishery in Div. 1A in 1988)
 39 (commercial trial shrimp fishery, E Greenland 1987)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 47 (A. plaice selectivity: square vs diamond codends)
 48 (S hake population size Div. 4VWX 1988, proj. 1990)
 49 (status of SA 1 cod and the fisheries)
 50 (Icelandic shrimp fishery in Denmark Strait)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 53 (shrimp fishery in SA 1 in 1988)
 54 (redfish in Div. 3LN)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 56 (status of redfish in Div. 3M)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 70 (shrimp fishery in Denmark Strait in 1988)
 74 (changes in G of St Lawrence herring in past 30 yr)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 82 (lobster abundance extremes, E Canada last 30 yr)

Conversion factor

SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)

Currents (water circulation)

SCR 89/ 3 (ocean temperature predictability at W Greenland)
 10 (overview of oceanography off NW Atlantic in 1988)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 75 (fish assemblages on the Grand Bank)
 85 (causes of Scotian S. hake abundance fluctuations)

[D]

Davis Strait (see Baffin Island and Greenland West)Denmark (Greenland)

SCR 89/ 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 SCS 89/ 2 (Denmark (Greenland) request for 1990 sci advice)
 14 (Denmark (Greenland) research report for 1988)

Denmark Strait (see Greenland, East)Depth

SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)
 10 (overview of oceanography off NW Atlantic in 1988)
 31 (G. halibut distribution and biology W Greenland)
 33 (cod distribution and abundance, W Greenland 1988)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 39 (commercial trial shrimp fishery, E Greenland 1987)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 51 (redfish biomass, abundance est. E & W Greenland)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 75 (fish assemblages on the Grand Bank)
 80 (fish populations on the Flemish Cap)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
 95 (G. of Maine shrimp stock: research and assessment)
 97 (multivariate study, length freq: shrimp Div. 4RST)

Discards

SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 95 (G. of Maine shrimp stock: research and assessment)

Distribution (also see Abundance)

SCR 89/ 4 (capelin acoustic surveys, Div. 3LNO, spring 1988)
 9 (food-feeding between cod and redfish, Flemish Cap)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 16 (S. hake, other fish, squid in Div. 4VWX in 1988)
 18 (Norwegian shrimp study in E Greenland, 1988)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 20 (inshore scallop resources in W Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 25 (meristics analysis of G. halibut in NW Atlantic)

SCR 89/ 29 (Canadian shrimp fishery in Div. 0A in 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 33 (cod distribution and abundance, W Greenland 1988)
 38 (Greenland shrimp fishery in Div. 1A in 1988)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 48 (S hake population size Div. 4VWX 1988, proj. 1990)
 53 (shrimp fishery in SA 1 in 1988)
 70 (shrimp fishery in Denmark Strait in 1988)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 75 (fish assemblages on the Grand Bank)
 77 (persistence in NW demersal fish assemblages)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 83 (nature of non-maturing redfish in NW Atlantic)
 85 (causes of Scotian S. hake abundance fluctuations)
 87 (bottom water effects on SA 3 fish distr. density)
 95 (G. of Maine shrimp stock: research and assessment)
 97 (multivariate study, length freq: shrimp Div. 4RST)

Diurnal patterns

SCR 89/ 1 (bivalves as model for predation patterns)

[E]

East Greenland (see Greenland, East)Ecology (also see Environment)

SCR 89/ 75 (fish assemblages on the Grand Bank)
 76 (multispecies size composition: exploited fishery)
 78 (aggregate fish biomass, production: Georges Bank)
 97 (multivariate study, length freq: shrimp Div. 4RST)

Eddies (see warm-core rings)EEC (see European Economic Community)Eggs (Ova)

SCR 89/ 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 72 (cod in Div. 3NO and abundance of other fish)

Environment (also see specific subject headings)

SCR 89/ 3 (ocean temperature predictability at W Greenland)
 10 (overview of oceanography off NW Atlantic in 1988)
 49 (status of SA 1 cod and the fisheries)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 74 (changes in G of St Lawrence herring in past 30 yr)
 82 (lobster abundance extremes, E Canada last 30 yr)
 84 (environmental changes on NW Atlantic fish stocks)
 85 (causes of Scotian S. hake abundance fluctuations)

European Economic Community (EEC)

SCS 89/ 3 (EEC request for scientific advice for 1990)

[F]

Fecundity

SCR 89/ 74 (changes in G of St Lawrence herring in past 30 yr)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)

Federal Republic of Germany (FRG)

SCR 89/ 51 (redfish biomass, abundance est. E & W Greenland)

Feeding, Food

SCR 89/ 9 (food-feeding between cod and redfish, Flemish Cap)
 31 (G. halibut distribution and biology W Greenland)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 81 (cannibalism on S hake population-status, Div. 4VWX)
 94 (age and growth of shrimp in Davis Strait)

Fishing effort (see catch)Fishing gear (also see specific gear)

SCR 89/ 4 (capelin acoustic surveys, Div. 3LNO, spring 1988)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 33 (cod distribution and abundance, W Greenland 1988)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)

SUBJECT INDEX

- SCR 89/ 41 (by-catch in shrimp fishery, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 46 (fish capture process of groundfish survey trawl)
 47 (A. plaice selectivity: square vs diamond codends)
 54 (redfish in Div. 3LN)
 56 (status of redfish in Div. 3M)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 69 (swept-area est. stock size and mortality, cod SA1)
 74 (changes in G of St Lawrence herring in past 30 yr)
 78 (aggregate fish biomass, production: Georges Bank)
 82 (lobster abundance extremes, E Canada last 30 yr)

Flatfish (see specific names)Flemish Cap (Div. 3M; also see Grand Bank)

- SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 9 (food-feeding between cod and redfish, Flemish Cap)
 10 (overview of oceanography off NW Atlantic in 1988)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 56 (status of redfish in Div. 3M)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 66 (MEDS environmental report for 1988)
 80 (fish populations on the Flemish Cap)
 87 (bottom water effects on SA 3 fish distr. density)

Flounder, witch (*Glyptocephalus cynoglossus*)

- SCR 89/ 7 (witch stock in Div. 3LNO from 1983-88 trawl data)
 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 78 (aggregate fish biomass, production: Georges Bank)

Flounder, yellowtail (*Limanda ferruginea*)

- SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 46 (fish capture process of groundfish survey trawl)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 72 (cod in Div. 3NO and abundance of other fish)
 75 (fish assemblages on the Grand Bank)
 78 (aggregate fish biomass, production: Georges Bank)
 79 (A. plaice, yellowtail, RV catches, Div. 3NO 1971-89)

Food (see Feeding)Fylla Bank

- SCR 89/ 3 (ocean temperature predictability at W Greenland)
 10 (overview of oceanography off NW Atlantic in 1988)
 66 (MEDS environmental report for 1988)

(G)

Gadidae (see specific names)Gadus morhua (see Cod, Atlantic)Genetics

- SCR 89/ 26 (genetics analysis of G. halibut in NW Atlantic)

Georges Bank (also see New England area)

- SCR 89/ 59 (continuous plankton records 1988, off eastern USA)
 62 (recruitment to herring stocks in NW Atlantic)
 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 67 (overview of NAFO environmental conditions, 1988)
 74 (changes in G of St Lawrence herring in past 30 yr)
 76 (multispecies size composition: exploited fishery)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)

German Democratic Republic (GDR)

- SCR 89/ 19 (GDR research report for 1988)

Gillnet

- SCR 89/ 21 (young cod inshore distribution, W Greenland 1988)
 27 (fishery for G. halibut in SA 1)

Glyptocephalus cynoglossus (see Flounder, witch)Grand Bank (Div. 3LNO including inshore)

- SCR 89/ 4 (capelin acoustic surveys, Div. 3LNO, spring 1988)
 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 7 (witch stock in Div. 3LNO from 1983-88 trawl data)
 10 (overview of oceanography off NW Atlantic in 1988)

- SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 46 (fish capture process of groundfish survey trawl)
 47 (A. plaice selectivity: square vs diamond codends)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 54 (redfish in Div. 3LN)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 72 (cod in Div. 3NO and abundance of other fish)
 75 (fish assemblages on the Grand Bank)
 79 (A. plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 87 (bottom water effects on SA 3 fish distr. density)
 88 (yield-per-recruit of A. plaice in Div. 3LNO)

Greenland, East ((Denmark Strait))

- SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 24 (cod in E Greenland from taggings in W Greenland)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 32 (modelling cod migration, Greenland to Iceland)
 36 (review of shrimp fishery in Denmark Strait)
 39 (commercial trial shrimp fishery, E Greenland 1987)
 49 (status of SA 1 cod and the fisheries)
 50 (Icelandic shrimp fishery in Denmark Strait)
 51 (redfish biomass, abundance est. E & W Greenland)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 70 (shrimp fishery in Denmark Strait in 1988)

Greenland, West (Subarea 1)

- SCR 89/ 3 (ocean temperature predictability at W Greenland)
 8 (NW Atlantic roundnose grenadier catch dynamics)
 10 (overview of oceanography off NW Atlantic in 1988)
 20 (inshore scallop resources in W Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 22 (cod 1984 year-class, W Greenland from CPUE data)
 23 (cod length distribution in W Greenland 1989-91)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 27 (fishery for G. halibut in SA 1)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 33 (cod distribution and abundance, W Greenland 1988)
 36 (Greenland shrimp fishery in Div. 1A in 1988)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 49 (status of SA 1 cod and the fisheries)
 51 (redfish biomass, abundance est. E & W Greenland)
 53 (shrimp fishery in SA 1 in 1988)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 66 (MEDS environmental report for 1988)
 69 (swept-area est. stock size and mortality, cod SA1)
 83 (nature of non-maturing redfish in NW Atlantic)
 84 (environmental changes on NW Atlantic fish stocks)
 86 (G. halibut stock, fecundity; NW Atlantic 1969-88)
 93 (modal analysis of shrimp length frequency distr.)
 94 (age and growth of shrimp in Davis Strait)

Greenland halibut (see Halibut, Greenland)Grenadier, roughhead (*Macrourus berglax*)

- SCR 89/ 31 (G. halibut distribution and biology W Greenland)

Grenadier, roundnose (*Coryphaenoides rupestris*)

- SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)

Groundfish (also see specific names)

- SCR 89/ 30 (groundfish biomass, 1988 trawl survey W Greenland)
 46 (fish capture process of groundfish survey trawl)
 47 (A. plaice selectivity: square vs diamond codends)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 75 (fish assemblages on the Grand Bank)
 77 (persistence in NW demersal fish assemblages)
 79 (A. plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 87 (bottom water effects on SA 3 fish distr. density)

SUBJECT INDEX

Growth

- SCR 89/ 1 (bivalves as model for predation patterns)
 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 20 (inshore scallop resources in W Greenland)
 23 (cod length distribution in W Greenland 1989-91)
 76 (multispecies size composition: exploited fishery)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 90 (growth, ageing of fjord populations of shrimp)
 91 (MULTIFAN method est. growth, age on pink shrimp)
 92 (population analysis by shrimp length, Div. 4S)
 94 (age and growth of shrimp in Davis Strait)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 98 (Shepherd length analysis: G. of Maine shrimp data)

Gulf of Maine

- SCR 89/ 59 (continuous plankton records 1988, off eastern USA)
 74 (changes in G of St Lawrence herring in past 30 yr)
 77 (persistence in NW demersal fish assemblages)
 82 (lobster abundance extremes, E Canada last 30 yr)
 94 (age and growth of shrimp in Davis Strait)
 95 (G. of Maine shrimp stock: research and assessment)
 98 (Shepherd length analysis: G. of Maine shrimp data)

Gulf of St. Lawrence

- SCR 89/ 67 (overview of NAFO environmental conditions, 1988)
 82 (lobster abundance extremes, E Canada last 30 yr)
 92 (population analysis by shrimp length, Div. 4S)
 94 (age and growth of shrimp in Davis Strait)
 97 (multivariate study, length freq: shrimp Div. 4RST)

Gulf Stream (also see hydrography and oceanography)

- SCR 89/ 59 (continuous plankton records 1988, off eastern USA)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 67 (overview of NAFO environmental conditions, 1988)
 84 (environmental changes on NW Atlantic fish stocks)
 85 (causes of Scotian S. hake abundance fluctuations)

[H]

Haddock (*Melanogrammus aeglefinus*)

- SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 47 (A. plaice selectivity: square vs diamond codends)
 78 (aggregate fish biomass, production: Georges Bank)

Hake, silver (*Merluccius bilinearis*)

- SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 11 (Canada-USSR S. hake otolith exchange results)
 12 (optimum numbers for ageing Div. 4VMX S. hake)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
 15 (total, fishing mortality rate, Div. 4VMX S. hake)
 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 78 (aggregate fish biomass, production: Georges Bank)
 81 (cannibalism on S hake population-status, Div. 4VMX)
 84 (environmental changes on NW Atlantic fish stocks)
 85 (causes of Scotian S. hake abundance fluctuations)

Halibut, Atlantic (*Hippoglossus hippoglossus*)

- SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)

Halibut, Greenland (*Reinhardtius hippoglossoides*)

- SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 27 (fishery for G. halibut in SA 1)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 73 (stock delimits by parasites, G. halibut NW Atl.)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)

Herring, Atlantic (*Clupea harengus*)

- SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 62 (recruitment to herring stocks in NW Atlantic)
 74 (changes in G of St Lawrence herring in past 30 yr)
 78 (aggregate fish biomass, production: Georges Bank)

Hippoglossus hippoglossus (see Halibut, Atlantic)Hydrography (also see specific subjects)

- SCR 89/ 3 (ocean temperature predictability at W Greenland)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 57 (scales of variability in W Greenland waters)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 67 (overview of NAFO environmental conditions, 1988)
 84 (environmental changes on NW Atlantic fish stocks)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
 90 (growth, ageing of fjord populations of shrimp)

[I]

Ice

- SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 57 (scales of variability in W Greenland waters)
 67 (overview of NAFO environmental conditions, 1988)

Iceland area (also see Greenland, East)

- SCR 89/ 24 (cod in E Greenland from taggings in W Greenland)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 32 (modelling cod migration, Greenland to Iceland)
 36 (review of shrimp fishery in Denmark Strait)
 49 (status of SA 1 cod and the fisheries)
 50 (Icelandic shrimp fishery in Denmark Strait)
 57 (scales of variability in W Greenland waters)
 96 (Iceland shrimp stock size est. by VPA, area swept)

Ichthyoplankton

- SCR 89/ 9 (food-feeding between cod and redfish, Flemish Cap)
 31 (G. halibut distribution and biology W Greenland)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 59 (continuous plankton records 1988, off eastern USA)
 81 (cannibalism on S hake population-status, Div. 4VMX)

Inshore (also see respective areas)

- SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)
 21 (young cod inshore distribution, W Greenland 1988)
 33 (cod distribution and abundance, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 49 (status of SA 1 cod and the fisheries)
 82 (lobster abundance extremes, E Canada last 30 yr)

Irminger Current (also see currents)

- SCR 89/ 3 (ocean temperature predictability at W Greenland)
 57 (scales of variability in W Greenland waters)
 58 (recent observations on deep waters, W Greenland)
 84 (environmental changes on NW Atlantic fish stocks)

[J]

Japan

- SCR 89/ 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 SCS 89/ 13 (Japanese research report for 1988)

[L]

Labrador area (Subarea 2)

- SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 58 (recent observations on deep waters, W Greenland)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 67 (overview of NAFO environmental conditions, 1988)
 83 (nature of non-maturing redfish in NW Atlantic)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
 94 (age and growth of shrimp in Davis Strait)

Larvae

- SCR 89/ 24 (cod in E Greenland from taggings in W Greenland)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 72 (cod in Div. 3NO and abundance of other fish)

Length: length composition

- SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)

SUBJECT INDEX

- SCR 89/ 7 (witch stock in Div. 3LNO from 1983-88 trawl data)
 8 (NW Atlantic roundnose grenadier catch dynamics)
 9 (food-feeding between cod and redfish, Flemish Cap)
 11 (Canada-USSR S. hake otolith exchange results)
 12 (optimum numbers for ageing Div. 4VMX S. hake)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 18 (Norwegian shrimp study in E Greenland, 1988)
 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 20 (inshore scallop resources in W Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 23 (cod length distribution in W Greenland 1989-91)
 25 (meristics analysis of G. halibut in NW Atlantic)
 27 (fishery for G. halibut in SA 1)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 29 (Canadian shrimp fishery in Div. 0A in 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 41 (by-catch in shrimp fishery, W Greenland 1988)
 43 (inshore capelin fishery in Div. 3L in 1988)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 46 (fish capture process of groundfish survey trawl)
 47 (A. plaice selectivity: square vs diamond codends)
 51 (redfish biomass, abundance est. E & W Greenland)
 53 (shrimp fishery in SA 1 in 1988)
 54 (redfish in Div. 3LN)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 56 (status of redfish in Div. 3M)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 70 (shrimp fishery in Denmark Strait in 1988)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 74 (changes in G of St Lawrence herring in past 30 yr)
 76 (multispecies size composition: exploited fishery)
 80 (fish populations on the Flemish Cap)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 90 (growth, ageing of fjord populations of shrimp)
 91 (MULTIFAN method est. growth, age on pink shrimp)
 92 (population analysis by shrimp length, Div. 4S)
 93 (modal analysis of shrimp length frequency distr.)
 94 (age and growth of shrimp in Davis Strait)
 95 (G. of Maine shrimp stock: research and assessment)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 97 (multivariate study, length freq: shrimp Div. 4RST)
 98 (Shepherd length analysis: G. of Maine shrimp data)

Limanda ferruginea (see Flounder, yellowtail)

Lobster, American (*Homarus americanus*)

- SCR 89/ 82 (lobster abundance extremes, E Canada last 30 yr)

Longline

- SCR 89/ 27 (fishery for G. halibut in SA 1)
 33 (cod distribution and abundance, W Greenland 1988)

[M]

Mackerel, Atlantic (*Scomber scombrus*)

- SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 72 (cod in Div. 3NO and abundance of other fish)
 78 (aggregate fish biomass, production: Georges Bank)

Mallotus villosus (see Capelin)

Management

- SCR 89/ 20 (inshore scallop resources in W Greenland)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 38 (Greenland shrimp fishery in Div. 1A in 1988)
 39 (commercial trial shrimp fishery, E Greenland 1987)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 49 (status of SA 1 cod and the fisheries)
 53 (shrimp fishery in SA 1 in 1988)
 54 (redfish in Div. 3LN)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 76 (multispecies size composition: exploited fishery)
 78 (aggregate fish biomass, production: Georges Bank)
 82 (lobster abundance extremes, E Canada last 30 yr)
 91 (MULTIFAN method est. growth, age on pink shrimp)
 95 (G. of Maine shrimp stock: research and assessment)
 SCS 89/ 1 (Canadian request for scientific advice for 1990)
 2 (Denmark (Greenland) request for 1990 sci advice)
 3 (EEC request for scientific advice for 1990)

Maturation

- SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)

- SCR 89/ 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
 28 (new Canadian shrimp fishery in Div. 0B in 1988)
 31 (G. halibut distribution and biology W Greenland)
 43 (inshore capelin fishery in Div. 3L in 1988)
 50 (Icelandic shrimp fishery in Denmark Strait)
 53 (shrimp fishery in SA 1 in 1988)
 83 (nature of non-maturing redfish in NW Atlantic)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 93 (modal analysis of shrimp length frequency distr.)
 94 (age and growth of shrimp in Davis Strait)
 96 (Iceland shrimp stock size est. by VPA, area swept)

MEDS

- SCR 89/ 66 (MEDS environmental report for 1988)

Meristics

- SCR 89/ 25 (meristics analysis of G. halibut in NW Atlantic)

Merluccius bilinearis (see Hake, silver)

Migration (also see Tagging)

- SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 24 (cod in E Greenland from taggings in W Greenland)
 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 31 (G. halibut distribution and biology W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 49 (status of SA 1 cod and the fisheries)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 74 (changes in G of St Lawrence herring in past 30 yr)
 90 (growth, ageing of fjord populations of shrimp)

Mollusca

- SCR 89/ 1 (bivalves as model for predation patterns)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
 20 (inshore scallop resources in W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 78 (aggregate fish biomass, production: Georges Bank)

Mortality

- SCR 89/ 1 (bivalves as model for predation patterns)
 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 15 (total, fishing mortality rate, Div. 4VMX S. hake)
 20 (inshore scallop resources in W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 35 (assessment of cod stock in Div. 3NO)
 56 (status of redfish in Div. 3M)
 69 (swept-area est. stock size and mortality, cod SA1)
 81 (cannibalism on S hake population-status, Div. 4VMX)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 98 (Shepherd length analysis: G. of Maine shrimp data)

Multiplicative model

- SCR 89/ 22 (cod 1984 year-class, W Greenland from CPUE data)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 54 (redfish in Div. 3LN)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 56 (status of redfish in Div. 3M)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)

[N]

New England area (Subareas 5 and 6)

- SCR 89/ 59 (continuous plankton records 1988, off eastern USA)
 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 76 (multispecies size composition: exploited fishery)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)
 SCS 89/ 4 (United States research report for 1988)

Newfoundland Shelf area (Div. 3K)

- SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
 26 (genetics analysis of G. halibut in NW Atlantic)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 43 (inshore capelin fishery in Div. 3L in 1988)
 44 (capelin school surface area index, Div. 3L, 1988)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 61 (status of G. halibut resource in SA 2 and Div. 3KL)
 87 (bottom water effects on SA 3 fish distr. density)

SUBJECT INDEX

Norway

SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)

NurserySCR 89/ 19 (Sept 1988 cruise report, M/T Masi, E Greenland)
71 (juvenile A. plaice distribution in Div. 3LNO)

[O]

Oceanography (also see specific subjects)SCR 89/ 3 (ocean temperature predictability at W Greenland)
10 (overview of oceanography off NW Atlantic in 1988)
57 (scales of variability in W Greenland waters)
58 (recent observations on deep waters, W Greenland)
63 (variation in shelf water front off NE USA, 1988)
64 (warm-core Gulf Stream rings off NE USA, 1988)
67 (overview of NAFO environmental conditions, 1988)
75 (fish assemblages on the Grand Bank)
77 (persistence in NW demersal fish assemblages)
87 (bottom water effects on SA 3 fish distr. density)OtolithsSCR 89/ 11 (Canada-USSR S. hake otolith exchange results)
25 (meristics analysis of G. halibut in NW Atlantic)
27 (fishery for G. halibut in SA 1)
33 (cod distribution and abundance, W Greenland 1988)
42 (Greenl.-Canada G. halibut otolith results 1986-89)
43 (inshore capelin fishery in Div. 3L in 1988)OxygenSCR 89/ 57 (scales of variability in W Greenland waters)
58 (recent observations on deep waters, W Greenland)

[P]

Pandalus sp. (see Shrimp)Parasites

SCR 89/ 73 (stock delimits by parasites, G. halibut NW Atl.)

Photography (see Remote-sensing)Plaice, American (*Hippoglossoides platessoides*)SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
37 (assess. update for A. plaice stock in Div. 3LNO)
45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
46 (fish capture process of groundfish survey trawl)
47 (A. plaice selectivity: square vs diamond codends)
60 (bottom-trawl survey results, Flemish Cap 1988)
71 (juvenile A. plaice distribution in Div. 3LNO)
72 (cod in Div. 3NO and abundance of other fish)
75 (fish assemblages on the Grand Bank)
79 (A. plaice, yellowtail, RV catches, Div. 3NO 1971-89)
88 (yield-per-recruit of A. plaice in Div. 3LNO)Plankton (see Ichthyoplankton)Poland

SCS 89/ 9 (Polish research report, 1988)

Pollock (saithe, *Pollachius virens*)SCR 89/ 16 (S. hake, other fish, squid in Div. 4VMX in 1988)
78 (aggregate fish biomass, production: Georges Bank)Portugal

SCS 89/ 15 (Portuguese research report for 1988)

Predation (also see Feeding)

SCR 89/ 1 (bivalves as model for predation patterns)

PublicationsSCS 89/ 11 (provisional index for 1988 SCR and SCS documents)
12 (statistical activities and publications note)

[R]

RecruitmentSCR 89/ 9 (food-feeding between cod and redfish, Flemish Cap)
14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)SCR 89/ 22 (cod 1984 year-class, W Greenland from CPUE data)
35 (assessment of cod stock in Div. 3NO)
37 (assess. update for A. plaice stock in Div. 3LNO)
49 (status of SA 1 cod and the fisheries)
62 (recruitment to herring stocks in NW Atlantic)
72 (cod in Div. 3NO and abundance of other fish)
74 (changes in G of St Lawrence herring in past 30 yr)
81 (cannibalism on S hake population-status, Div. 4VMX)
82 (lobster abundance extremes, E Canada last 30 yr)
88 (yield-per-recruit of A. plaice in Div. 3LNO)
92 (population analysis by shrimp length, Div. 4S)
98 (Shepherd length analysis: G. of Maine shrimp data)Redfishes, Atlantic (*Sebastes* sp.)SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
9 (food-feeding between cod and redfish, Flemish Cap)
16 (S. hake, other fish, squid in Div. 4VMX in 1988)
18 (Norwegian shrimp study in E Greenland, 1988)
28 (new Canadian shrimp fishery in Div. 0B in 1988)
29 (Canadian shrimp fishery in Div. 0A in 1988)
30 (groundfish biomass, 1988 trawl survey W Greenland)
31 (G. halibut distribution and biology W Greenland)
40 (stratified-random trawl survey, SA0+1 shrimp 1988)
41 (by-catch in shrimp fishery, W Greenland 1988)
45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
51 (redfish biomass, abundance est. E & W Greenland)
54 (redfish in Div. 3LN)
56 (status of redfish in Div. 3M)
60 (bottom-trawl survey results, Flemish Cap 1988)
72 (cod in Div. 3NO and abundance of other fish)
75 (fish assemblages on the Grand Bank)
83 (nature of non-maturing redfish in NW Atlantic)
87 (bottom water effects on SA 3 fish distr. density)Reinhardtius hippoglossoides (see Halibut, Greenland)Remote-sensingSCR 89/ 44 (capelin school surface area index, Div. 3L, 1988)
63 (variation in shelf water front off NE USA, 1988)Research reportsSCS 89/ 4 (United States research report for 1988)
5 (Canadian research report for 1988)
8 (USSR research report for 1988)
9 (Polish research report, 1988)
13 (Japanese research report for 1988)
14 (Denmark (Greenland) research report for 1988)
15 (Portuguese research report for 1988)
16 (Spanish research report for 1988)
19 (GDR research report for 1988)Roughhead grenadier (see Grenadier, roughhead)Roundnose grenadier (see Grenadier, roundnose)

[S]

SalinitySCR 89/ 3 (ocean temperature predictability at W Greenland)
10 (overview of oceanography off NW Atlantic in 1988)
58 (recent observations on deep waters, W Greenland)
59 (continuous plankton records 1988, off eastern USA)
63 (variation in shelf water front off NE USA, 1988)
67 (overview of NAFO environmental conditions, 1988)SamplingSCR 89/ 12 (optimum numbers for ageing Div. 4VMX S. hake)
33 (cod distribution and abundance, W Greenland 1988)
34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
35 (assessment of cod stock in Div. 3NO)
37 (assess. update for A. plaice stock in Div. 3LNO)
38 (Greenland shrimp fishery in Div. 1A in 1988)
40 (stratified-random trawl survey, SA0+1 shrimp 1988)
43 (inshore capelin fishery in Div. 3L in 1988)
46 (fish capture process of groundfish survey trawl)
47 (A. plaice selectivity: square vs diamond codends)
52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
59 (continuous plankton records 1988, off eastern USA)
68 (assessment of yellowtail flounder in Div. 3LNO)
SCS 89/ 10 (list of biological sampling data for 1987)Satellite imagery (also see Remote-sensing)SCR 89/ 63 (variation in shelf water front off NE USA, 1988)
64 (warm-core Gulf Stream rings off NE USA, 1988)Scallop

SCR 89/ 20 (inshore scallop resources in W Greenland)

SUBJECT INDEX

SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)

Scientific Council (NAFO)

SCS 89/ 17 (prov. report of Scientific Council, June 1989)
20 (report of Scientific Council, September 1989)

Scotian Shelf (Div. 4VWX)

SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
11 (Canada-USSR S. hake otolith exchange results)
12 (optimum numbers for ageing Div. 4VWX S. hake)
14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
15 (total, fishing mortality rate, Div. 4VWX S. hake)
16 (S. hake, other fish, squid in Div. 4VWX in 1988)
17 (linear and weight growth rates, Div. 4VWX S. hake)
48 (S hake population size Div. 4VWX 1988, proj. 1990)
59 (continuous plankton records 1988, off eastern USA)
64 (warm-core Gulf Stream rings off NE USA, 1988)
66 (MEDS environmental report for 1988)
67 (overview of NAFO environmental conditions, 1988)
81 (cannibalism on S hake population-status, Div. 4VWX)
82 (lobster abundance extremes, E Canada last 30 yr)
85 (causes of Scotian S. hake abundance fluctuations)

Sebastes sp. (see Under Redfishes, Atlantic)

Sequential population analysis (SPA)

SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
22 (cod 1984 year-class, W Greenland from CPUE data)
35 (assessment of cod stock in Div. 3NO)
37 (assess. update for A. plaice stock in Div. 3LNO)
48 (S hake population size Div. 4VWX 1988, proj. 1990)
68 (assessment of yellowtail flounder in Div. 3LNO)
69 (swept-area est. stock size and mortality, cod SA1)
86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
92 (population analysis by shrimp length, Div. 4S)
93 (modal analysis of shrimp length frequency distr.)
96 (Iceland shrimp stock size est. by VPA, area swept)

Shrimp (*Pandalus* sp.)

SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)
19 (Sept 1988 cruise report, M/T Masi, E Greenland)
27 (fishery for G. halibut in SA 1)
29 (Canadian shrimp fishery in Div. 0A in 1988)
31 (G. halibut distribution and biology W Greenland)
36 (review of shrimp fishery in Denmark Strait)
38 (Greenland shrimp fishery in Div. 1A in 1988)
39 (commercial trial shrimp fishery, E Greenland 1987)
40 (stratified-random trawl survey, SA0+1 shrimp 1988)
41 (by-catch in shrimp fishery, W Greenland 1988)
50 (Icelandic shrimp fishery in Denmark Strait)
53 (shrimp fishery in SA 1 in 1988)
60 (bottom-trawl survey results, Flemish Cap 1988)
61 (status of G. halibut resource in SA2 and Div. 3KL)
70 (shrimp fishery in Denmark Strait in 1988)
89 (age, growth, mortality: Alaskan stock of shrimp)
90 (growth, ageing of fjord populations of shrimp)
91 (MULTIFAN method est. growth, age on pink shrimp)
92 (population analysis by shrimp length, Div. 4S)
93 (modal analysis of shrimp length frequency distr.)
94 (age and growth of shrimp in Davis Strait)
95 (G. of Maine shrimp stock: research and assessment)
96 (Iceland shrimp stock size est. by VPA, area swept)
97 (multivariate study, length freq: shrimp Div. 4RST)
98 (Shepherd length analysis: G. of Maine shrimp data)
SCS 89/ 22 (report of working group on ageing *Pandalus*)

Silver hake (see Hake, silver)

Spain

SCS 89/ 16 (Spanish research report for 1988)

Spawning (also see Eggs, Maturation)

SCR 89/ 24 (cod in E Greenland from taggings in W Greenland)
25 (meristics analysis of G. halibut in NW Atlantic)
26 (genetics analysis of G. halibut in NW Atlantic)
44 (capelin school surface area index, Div. 3L, 1988)
50 (Icelandic shrimp fishery in Denmark Strait)
72 (cod in Div. 3NO and abundance of other fish)
74 (changes in G of St. Lawrence herring in past 30 yr)
84 (environmental changes on NW Atlantic fish stocks)
86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
96 (Iceland shrimp stock size est. by VPA, area swept)

Squid

SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
16 (S. hake, other fish, squid in Div. 4VWX in 1988)
31 (G. halibut distribution and biology W Greenland)

STACFIS (NAFO)

SCS 89/ 17 (prov. report of Scientific Council, June 1989)
20 (report of Scientific Council, September 1989)

STACPUB (NAFO)

SCS 89/ 17 (prov. report of Scientific Council, June 1989)
20 (report of Scientific Council, September 1989)

STACREC (NAFO)

SCS 89/ 17 (prov. report of Scientific Council, June 1989)
20 (report of Scientific Council, September 1989)

Statistics

SCR 89/ 36 (review of shrimp fishery in Denmark Strait)
38 (Greenland shrimp fishery in Div. 1A in 1988)
54 (redfish in Div. 3LN)
55 (update on roundnose grenadier in SA 0+1 and 2+3)
56 (status of redfish in Div. 3M)
68 (assessment of yellowtail flounder in Div. 3LNO)
74 (changes in G of St. Lawrence herring in past 30 yr)
78 (aggregate fish biomass, production: Georges Bank)
89 (age, growth, mortality: Alaskan stock of shrimp)
SCS 89/ 7 (historical catches for some stocks, 1977-87)
12 (statistical activities and publications note)
18 (sections of Convention re reporting statistics)
21 (provisional nominal catches for 1988)

Stock density

SCR 89/ 44 (capelin school surface area index, Div. 3L, 1988)

Stock, stock size (also see Abundance; Assessment)

SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
5 (cod assessment in SA 3, 1988 trawl-acoustic data)
6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
7 (witch stock in Div. 3LNO from 1983-88 trawl data)
14 (S. hake assess. 1988, prospects 1990, Div. 4VWX)
20 (inshore scallop resources in W Greenland)
22 (cod 1984 year-class, W Greenland from CPUE data)
35 (assessment of cod stock in Div. 3NO)
36 (review of shrimp fishery in Denmark Strait)
37 (assess. update for A. plaice stock in Div. 3LNO)
38 (Greenland shrimp fishery in Div. 1A in 1988)
40 (stratified-random trawl survey, SA0+1 shrimp 1988)
48 (S hake population size Div. 4VWX 1988, proj. 1990)
52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
54 (redfish in Div. 3LN)
55 (update on roundnose grenadier in SA 0+1 and 2+3)
56 (status of redfish in Div. 3M)
57 (scales of variability in W Greenland waters)
62 (recruitment to herring stocks in NW Atlantic)
68 (assessment of yellowtail flounder in Div. 3LNO)
69 (swept-area est. stock size and mortality, cod SA1)
74 (changes in G of St. Lawrence herring in past 30 yr)
81 (cannibalism on S hake population-status, Div. 4VWX)
84 (environmental changes on NW Atlantic fish stocks)
86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
87 (bottom water effects on SA 3 fish distr. density)
95 (G. of Maine shrimp stock: research and assessment)
96 (Iceland shrimp stock size est. by VPA, area swept)

Stock, discrimination (also see Distribution)

SCR 89/ 1 (bivalves as model for predation patterns)
20 (inshore scallop resources in W Greenland)
25 (meristics analysis of G. halibut in NW Atlantic)
26 (genetics analysis of G. halibut in NW Atlantic)
28 (new Canadian shrimp fishery in Div. 0B in 1988)
33 (cod distribution and abundance, W Greenland 1988)
34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
49 (status of SA 1 cod and the fisheries)
73 (stock delimits by parasites, G. halibut NW Atl.)
74 (changes in G of St. Lawrence herring in past 30 yr)
78 (aggregate fish biomass, production: Georges Bank)
80 (fish populations on the Flemish Cap)
82 (lobster abundance extremes, E Canada last 30 yr)
89 (age, growth, mortality: Alaskan stock of shrimp)
90 (growth, ageing of fjord populations of shrimp)
92 (population analysis by shrimp length, Div. 4S)
97 (multivariate study, length freq: shrimp Div. 4RST)

Surveys, biological

SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
5 (cod assessment in SA 3, 1988 trawl-acoustic data)
6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
7 (witch stock in Div. 3LNO from 1983-88 trawl data)
8 (NW Atlantic roundnose grenadier catch dynamics)
10 (overview of oceanography off NW Atlantic in 1988)

SUBJECT INDEX

SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
 15 (total, fishing mortality rate, Div. 4VMX S. hake)
 19 (Sept 1988 cruise report, M/T *Nessi*, E Greenland)
 20 (inshore scallop resources in W Greenland)
 21 (young cod inshore distribution, W Greenland 1988)
 30 (groundfish biomass, 1988 trawl survey W Greenland)
 31 (G. halibut distribution and biology W Greenland)
 33 (cod distribution and abundance, W Greenland 1988)
 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
 46 (fish capture process of groundfish survey trawl)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 49 (status of SA 1 cod and the fisheries)
 51 (redfish biomass, abundance est. E & W Greenland)
 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
 60 (bottom-trawl survey results, Flemish Cap 1988)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 69 (swept-area est. stock size and mortality, cod SA1)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 73 (stock delimits by parasites, G. halibut NW Atl.)
 75 (fish assemblages on the Grand Bank)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 96 (Iceland shrimp stock size est. by VPA, area swept)
 98 (Shepherd length analysis: G. of Maine shrimp data)

[T]

TAC (Total allowable catch)

SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)
 14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
 35 (assessment of cod stock in Div. 3NO)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 38 (Greenland shrimp fishery in Div. 1A in 1988)
 48 (S hake population size Div. 4VMX 1988, proj. 1990)
 53 (shrimp fishery in SA 1 in 1988)
 54 (redfish in Div. 3LN)
 56 (status of redfish in Div. 3M)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)

Tagging

SCR 89/ 24 (cod in E Greenland from taggings in W Greenland)
 32 (modelling cod migration, Greenland to Iceland)
 74 (changes in G of St Lawrence herring in past 30 yr)
 SCS 89/ 6 (tagging activities reported for 1988)

Temperature

SCR 89/ 3 (ocean temperature predictability at W Greenland)
 8 (NW Atlantic roundnose grenadier catch dynamics)
 10 (overview of oceanography off NW Atlantic in 1988)
 13 (fishery biol. and temperature SA 3 squid 1986-88)
 51 (redfish biomass, abundance est. E & W Greenland)
 58 (recent observations on deep waters, W Greenland)
 59 (continuous plankton records 1988, off eastern USA)
 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)
 80 (fish populations on the Flemish Cap)
 84 (environmental changes on NW Atlantic fish stocks)
 85 (causes of Scotian S. hake abundance fluctuations)
 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)

Trawl (see fishing gear)

[U]

USA (United States of America)

SCS 89/ 4 (United States research report for 1988)

USA Northeast

SCR 89/ 59 (continuous plankton records 1988, off eastern USA)
 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 76 (multispecies size composition: exploited fishery)
 77 (persistence in NW demersal fish assemblages)
 78 (aggregate fish biomass, production: Georges Bank)

USSR (Union of Soviet Socialist Republics)

SCR 89/ 11 (Canada-USSR S. hake otolith exchange results)
 SCS 89/ 8 (USSR research report for 1988)

[V]

VPA (see Sequential population analysis)Von Bertalanffy

SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 20 (inshore scallop resources in W Greenland)
 23 (cod length distribution in W Greenland 1989-91)
 89 (age, growth, mortality: Alaskan stock of shrimp)
 90 (growth, ageing of fjord populations of shrimp)
 98 (Shepherd length analysis: G. of Maine shrimp data)

[W]

Warm-core rings (Eddies)

SCR 89/ 57 (scales of variability in W Greenland waters)
 63 (variation in shelf water front off NE USA, 1988)
 64 (warm-core Gulf Stream rings off NE USA, 1988)
 65 (water thermal structure SE of Sandy Hook USA 1988)
 67 (overview of NAFO environmental conditions, 1988)

Waves

SCR 89/ 66 (MEDS environmental report for 1988)
 67 (overview of NAFO environmental conditions, 1988)

Weight (also see Catch)

SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)
 9 (food-feeding between cod and redfish, Flemish Cap)
 17 (linear and weight growth rates, Div. 4VMX S. hake)
 23 (cod length distribution in W Greenland 1989-91)
 27 (fishery for G. halibut in SA 1)
 49 (status of SA 1 cod and the fisheries)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 71 (juvenile A. plaice distribution in Div. 3LNO)
 74 (changes in G of St Lawrence herring in past 30 yr)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
 80 (fish populations on the Flemish Cap)
 88 (yield-per-recruit of A. plaice in Div. 3LNO)

West Greenland (see Greenland, West)Witch flounder (see Flounder, witch)Working Groups, Working Party

SCS 89/ 22 (report of working group on ageing *Pandalus*)

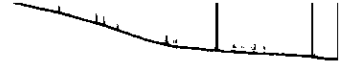
[Y]

Yellowtail flounder (see Flounder, yellowtail)Yield; Yield-per-recruit

SCR 89/ 20 (inshore scallop resources in W Greenland)
 37 (assess. update for A. plaice stock in Div. 3LNO)
 81 (cannibalism on S hake population-status, Div. 4VMX)
 88 (yield-per-recruit of A. plaice in Div. 3LNO)

[Z]

Zooplankton (see Ichthyoplankton)



AUTHOR INDEX

[A]

- ALBIKOVSKAYA, L. K. (USSR)
 SCR 89/ 9 (food-feeding between cod and redfish, Flemish Cap)
- ALMEIDA, F. P. (USA)
 SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)
- ALVAREZ, F. J. V. (Spain)
 SCR 89/ 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
- ANDERSON, P. J. (USA)
 SCR 89/ 89 (age, growth, mortality: Alaskan stock of shrimp)
- ARROYO, A. F. (Spain)
 SCR 89/ 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
- ATKINSON, D. B. (Canada)
 SCR 89/ 54 (redfish in Div. 3LN)
 55 (update on roundnose grenadier in SA 0+1 and 2+3)
 56 (status of redfish in Div. 3M)
- AUSTER, P. J. (USA)
 SCR 89/ 1 (bivalves as model for predation patterns)

[B]

- BAIDALINOV, A. P. (USSR)
 SCR 89/ 84 (environmental changes on NW Atlantic fish stocks)
- BAIRD, J. W. (Canada)
 SCR 89/ 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
 80 (fish populations on the Flemish Cap)
- BECK, P. C. (Canada)
 SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
- BENWAY, R. L. (USA)
 SCR 89/ 65 (water thermal structure SE of Sandy Hook USA 1988)
- BERGSTROM, B. I. (Sweden)
 SCR 89/ 90 (growth, ageing of fjord populations of shrimp)
- BERTRAND, J. (France)
 SCR 89/ 88 (yield-per-recruit of A. plaice in Div. 3LNO)
- BISHOP, C. A. (Canada)
 SCR 89/ 34 (cod biomass, age in Div. 2J+3KL beyond 200-miles)
 35 (assessment of cod stock in Div. 3NO)
- BOJE, J. (Denmark)
 SCR 89/ 25 (meristics analysis of G. halibut in NW Atlantic)
 26 (genetics analysis of G. halibut in NW Atlantic)
 27 (fishery for G. halibut in SA 1)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
- BOROVKOV, V. A. (USSR)
 SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
 87 (bottom water effects on SA 3 fish distr. density)
- BOUTILLIER, J. (Canada)
 SCR 89/ 91 (MULTIFAN method est. growth, age on pink shrimp)
- BOURBONNAIS, M. C. (Canada)
 SCR 89/ 48 (S hake population size Div. 4VMX 1988, proj. 1990)
- BOWERING, W. R. (Canada)
 SCR 89/ 37 (assess. update for A. plaice stock in Div. 3LNO)
 42 (Greenl.-Canada G. halibut otolith results 1986-89)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of Yellowtail flounder in Div. 3LNO)

- BOYAR, H. C. (USA)
 SCS 89/ 4 (United States research report for 1988)
- BRAGASON, G. S. (Iceland)
 SCR 89/ 96 (Iceland shrimp stock size est. by VPA, area swept)
- BRODIE, W. B.
 SCR 89/ 37 (assess. update for A. plaice stock in Div. 3LNO)
 61 (status of G. halibut resource in SA2 and Div. 3KL)
 68 (assessment of yellowtail flounder in Div. 3LNO)
 79 (A plaice, yellowtail, RV catches, Div. 3NO 1971-89)
- BUCH, E. (Denmark)
 SCR 89/ 3 (ocean temperature predictability at W Greenland)
- BULATOVA, A. Yu. (USSR)
 SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
 87 (bottom water effects on SA 3 fish distr. density)

[C]

- CANALEJO, F. J. P. (Spain)
 SCR 89/ 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
- CARLSSON, D. M. (Denmark)
 SCR 89/ 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
 53 (shrimp fishery in SA 1 in 1988)
 70 (shrimp fishery in Denmark Strait in 1988)
 94 (age and growth of shrimp in Davis Strait)
- CARSCADDEN, J. E. (Canada)
 SCR 89/ 52 (capelin biomass by acoustic Div. 3LN; USSR fishery)
- CHECHENIN, S. V. (USSR)
 SCR 89/ 4 (capelin acoustic surveys, Div. 3KLNO, spring 1988)
- CHUMAKOV, A. K. (USSR)
 SCR 89/ 86 (G. halibut stock, fecundity; NW Atlantic 1969-88)
 87 (bottom water effects on SA 3 fish distr. density)
 SCS 89/ 8 (USSR research report for 1988)
- CLARK, S. (USA)
 SCR 89/ 95 (G. of Maine shrimp stock; research and assessment)
- COADY, L. W. (Canada)
 SCS 89/ 5 (Canadian research report for 1988)
- COOPER, C. (Canada)
 SCR 89/ 47 (A. plaice selectivity: square vs diamond codends)
- CORNUS, H. P. (Federal Republic Germany)
 SCR 89/ 51 (redfish biomass, abundance est. E & W Greenland)

[D]

- DAWE, E. G. (Canada)
 SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
- DE CARENAS, E. (Spain)
 SCR 89/ 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)
- DIODATI, P. (USA)
 SCR 89/ 95 (G. of Maine shrimp stock; research and assessment)
- DREW, J. (Canada)
 SCR 89/ 13 (fishery biol. and temperature SA 3 squid 1986-88)
- DRINKWATER, K. F. (Canada)
 SCR 89/ 67 (overview of NAFO environmental conditions, 1988)

AUTHOR INDEX

[E]

EGGERS, R. (German Democratic Republic)
SCS 89/ 19 (GDR research report for 1988)

ERNST, P. (German Democratic Republic)

SCR 89/ 73 (stock delimits by parasites, G. halibut NW Atl.)
SCS 89/ 19 (GDR research report for 1988)

[F]

FAIRFIELD, C. P. (USA)

SCR 89/ 64 (warm-core Gulf Stream rings off NE USA, 1988)

FOGARTY, M. J. (USA)

SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)

FOURNIER, D. A. (Canada)

SCR 89/ 91 (MULTIFAN method est. growth, age on pink shrimp)

FRÉCHET, A. (Canada)

SCS 89/ 5 (Canadian research report for 1988)

FUONG, N. (USSR)

SCR 89/ 17 (linear and weight growth rates, Div. 4VWX S. hake)

[G]

GABRIEL, W. L. (USA)

SCR 89/ 77 (persistence in NW demersal fish assemblages)

GALLAGHER, E. (EEC)

SCS 89/ 3 (EEC request for scientific advice for 1990)

GANDARAS, G. P. (Spain)

SCS 89/ 16 (Spanish research report for 1988)

GERASIMOVA, O. V. (USSR)

SCR 89/ 9 (food-feeding between cod and redfish, Flemish Cap)

GODINHO, M. L. (Portugal)

SCS 89/ 15 (Portuguese research report for 1988)

GOMES, M. C. (Canada)

SCR 89/ 75 (fish assemblages on the Grand Bank)

GROUT, D. (USA)

SCR 89/ 95 (G. of Maine shrimp stock: research and assessment)

[H]

HAEDRICH, R. (Canada)

SCR 89/ 75 (fish assemblages on the Grand Bank)

HARE, G. M. (Canada)

SCS 89/ 5 (Canadian research report for 1988)

HARNUM, R. W. (Canada)

SCR 89/ 43 (inshore capelin fishery in Div. 3L in 1988)

HASKELL, B. (USA)

SCR 89/ 1 (bivalves as model for predation patterns)

HELGASON, V. (Iceland)

SCR 89/ 96 (Iceland shrimp stock size est. by VPA, area swept)

HICKEY, W. (Canada)

SCR 89/ 47 (A. plaice selectivity: square vs diamond codends)

HORSTED, Sv. Aa. (Denmark)

SCR 89/ 49 (status of SA 1 cod and the fisheries)

HOVGÅRD, H. (Denmark)

SCR 89/ 21 (young cod inshore distribution, W Greenland 1988)
22 (cod 1984 year-class, W Greenland from CPUE data)
23 (cod length distribution in W Greenland 1989-91)
24 (cod in E Greenland from taggings in W Greenland)
32 (modelling cod migration, Greenland to Iceland)
33 (cod distribution and abundance, W Greenland 1988)
69 (swept-area est. stock size and mortality, cod SA1)

HUNT, J. J. (Canada)

SCR 89/ 11 (Canada-USSR S. hake otolith exchange results)

[I]

IDOINE, J. S. (USA)

SCR 89/ 76 (multispecies size composition: exploited fishery)
98 (Shepherd length analysis: G. of Maine shrimp data)

[J]

JØRGENSEN, O. (Denmark)

SCR 89/ 30 (groundfish biomass, 1988 trawl survey W Greenland)
31 (G. halibut distribution and biology W Greenland)

JOSSI, J. W. (USA)

SCR 89/ 59 (continuous plankton records 1988, off eastern USA)

[K]

KANNEWORFF, P. (Denmark)

SCR 89/ 40 (stratified-random trawl survey, SA0+1 shrimp 1988)
53 (shrimp fishery in SA 1 in 1988)
70 (shrimp fishery in Denmark Strait in 1988)

KEELEY, J. R. (Canada)

SCR 89/ 66 (MEDS environmental report for 1988)

KUZMIN, S. A. (USSR)

SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)
7 (witch stock in Div. 3LNO from 1983-88 trawl data)

[L]

LARRAÑETA, M. G. (Spain)

SCR 89/ 72 (cod in Div. 3NO and abundance of other fish)

LASSEN, H. (Denmark)

SCR 89/ 32 (modelling cod migration, Greenland to Iceland)
33 (cod distribution and abundance, W Greenland 1988)

LEHMANN, K. M. (Denmark)

SCR 89/ 21 (young cod inshore distribution, W Greenland 1988)
33 (cod distribution and abundance, W Greenland 1988)
39 (commercial trial shrimp fishery, E Greenland 1988)
41 (by-catch in shrimp fishery, W Greenland 1988)

LUND, H. (Denmark)

SCR 89/ 38 (Greenland shrimp fishery in Div. 1A in 1988)

[M]

MALATESTA, R. (USA)

SCR 89/ 1 (bivalves as model for predation patterns)

MAYO, R. K. (USA)

SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)

AUTHOR INDEX

MESSIEH, S. N. (Canada)

SCR 89/ 74 (changes in G of St Lawrence herring in past 30 yr)

MESSTORFF, J. (Federal Republic Germany)

SCR 89/ 51 (redfish biomass, abundance est. E & W Greenland)

MEYBOOM, P. (Canada)

SCS 89/ 1 (Canadian request for scientific advice for 1990)

MILLER, D. S. (Canada)

SCR 89/ 52 (capelin biomass by acoustic Div. 3LN: USSR fishery)

MOHN, R. K. (Canada)

SCR 89/ 92 (population analysis by shrimp length, Div. 4S)

MURANSKI, S. A. (USA)

SCR 89/ 76 (multispecies size composition: exploited fishery)

[N]

NAFO (Northwest Atlantic Fisheries Organization)

SCS 89/ 17 (prov. report of Scientific Council, June 1989)
20 (Report of Scientific Council, September 1989)

NAFO EXECUTIVE SECRETARY

SCS 89/ 18 (sections of Convention re reporting statistics)

NAFO SECRETARIAT

SCS 89/ 6 (tagging activities reported for 1988)
7 (historical catches for some stocks, 1977-87)
10 (list of biological sampling data for 1987)
11 (provisional index for 1988 SCR and SCS documents)
12 (statistical activities and publications note)
21 (provisional nominal catches for 1988)

NAKASHIMA, B. S. (Canada)

SCR 89/ 43 (inshore capelin fishery in Div. 3L in 1988)
44 (capelin school surface area index, Div. 3L, 1988)

NOË, R. (EEC)

SCR 89/ 88 (yield-per-recruit of A. plaice in Div. 3LNO)

NOSKOV, A. S. (USSR)

SCR 89/ 62 (recruitment to herring stocks in NW Atlantic)

NYGÅRD, K. H. (Denmark)

SCR 89/ 21 (young cod inshore distribution, W Greenland 1988)
33 (cod distribution and abundance, W Greenland 1988)

[O]

OGANIN, I. A. (USSR)

SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)

[P]

PACIORKOWSKI, A. J. (Poland)

SCS 89/ 9 (Polish research report, 1988)

PARSONS, D. G. (Canada)

SCR 89/ 28 (new Canadian shrimp fishery in Div. 0B in 1988)
29 (Canadian shrimp fishery in Div. 0A in 1988)
93 (modal analysis of shrimp length frequency distr.)
94 (age and growth of shrimp in Davis Strait)
SCS 89/ 22 (report of working group on ageing *Pandalus*)

PAULSEN, J. (Denmark)

SCS 89/ 2 (Denmark (Greenland) request for 1990 sci advice)

PAZ, J. (Spain)

SCR 89/ 72 (cod in Div. 3NO and abundance of other fish)

PEDERSEN, S. A. (Denmark)

SCR 89/ 20 (inshore scallop resources in W Greenland)
41 (by-catch in shrimp fishery, W Greenland 1988)

SCS 89/ 14 (Denmark (Greenland) research report for 1988)

PETEROPSH, V. V. (USSR)

SCR 89/ 12 (optimum numbers for ageing Div. 4VMX S. hake)

PETROV, V. N. (USSR)

SCR 89/ 4 (capelin acoustic surveys, Div. 3LNO, spring 1988)
5 (cod assessment in SA 3, 1988 trawl-acoustic data)

PEZZACK, D. S. (Canada)

SCR 89/ 82 (lobster abundance extremes, E Canada last 30 yr)

POWER, D. (Canada)

SCR 89/ 54 (redfish in Div. 3LN)
55 (update on roundnose grenadier in SA 0+1 and 2+3)
56 (status of redfish in Div. 3M)

[R]

RATUSHNY, S. V. (USSR)

SCR 89/ 5 (cod assessment in SA 3, 1988 trawl-acoustic data)

REIMER, L. W. (German Democratic Republic)

SCR 89/ 73 (stock delimits by parasites, G. halibut NW Atl.)

RICE, J. C. (Canada)

SCR 89/ 75 (fish assemblages on the Grand Bank)

RIGET, F. (Denmark)

SCR 89/ 22 (cod 1984 year-class, W Greenland from CPUE data)
23 (cod length distribution in W Greenland 1989-91)
24 (cod in E Greenland from taggings in W Greenland)
25 (meristics analysis of G. halibut in NW Atlantic)
26 (genetics analysis of G. halibut in NW Atlantic)
27 (fishery for G. halibut in SA 1)
32 (modelling cod migration, Greenland to Iceland)
33 (cod distribution and abundance, W Greenland 1988)
42 (Greenl.-Canada G. halibut otolith results 1986-89)

RIKHTER, V. A. (USSR)

SCR 89/ 12 (optimum numbers for ageing Div. 4VMX S. hake)
14 (S. hake assess. 1988, prospects 1990, Div. 4VMX)
15 (total, fishing mortality rate, Div. 4VMX S. hake)
16 (S. hake, other fish, squid in Div. 4VMX in 1988)
SCS 89/ 8 (USSR research report for 1988)

RUDNEVA, G. B. (USSR)

SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)

[S]

SANCHEZ, J. M. C. (Spain)

SCR 89/ 45 (feeding: A. plaice redfish cod, Flemish Cap 1988)

SANO, M. H. (USA)

SCR 89/ 64 (warm-core Gulf Stream rings off NE USA, 1988)

SAVARD, L. (Canada)

SCR 89/ 92 (population analysis by shrimp length, Div. 4S)
93 (modal analysis of shrimp length frequency distr.)
94 (age and growth of shrimp in Davis Strait)
97 (multivariate study, length freq: shrimp Div. 4RST)

SAVVATIMSKY, P. I. (USSR)

SCR 89/ 8 (NW Atlantic roundnose grenadier catch dynamics)
87 (bottom water effects on SA 3 fish distr. density)

SCHICK, D. F. (USA)

SCR 89/ 95 (G. of Maine shrimp stock: research and assessment)

AUTHOR INDEX

SCOTT, J. S. (Canada)

SCR 89/ 5 (Canadian research report for 1988)

SERCHUK, F. M. (USA)

SCR 89/ 78 (aggregate fish biomass, production: Georges Bank)
SCS 89/ 4 (United States research report for 1988)

SEREBRYAKOV, V. P. (USSR)

SCR 89/ 86 (G. halibut stock, fecundity: NW Atlantic 1969-88)

SHOWELL, M. A. (Canada)

SCR 89/ 48 (S hake population size Div. 4VWX 1988, proj. 1990)

SIBERT, J. R. (Canada)

SCR 89/ 91 (MULTIFAN method est. growth, age on pink shrimp)

SIGAEV, I. K. (USSR)

SCR 89/ 85 (causes of Scotian S. hake abundance fluctuations)
SCS 89/ 8 (USSR research report for 1988)

SIMARD, Y. (Canada)

SCR 89/ 97 (multivariate study, length freq: shrimp Div. 4RST)

SIMONSEN, V. (Denmark)

SCR 89/ 26 (genetics analysis of G. halibut in NW Atlantic)

SKÚLADÓTTIR, U. (Iceland)

SCR 89/ 36 (review of shrimp fishery in Denmark Strait)
50 (Icelandic shrimp fishery in Denmark Strait)
96 (Iceland shrimp stock size est. by VPA, area swept)

SMEDSTAD, O. M. (Norway)

SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)
19 (Sept 1988 cruise report, M/T Masi, E Greenland)

SMITH, D. E. (USA)

SCR 89/ 59 (continuous plankton records 1988, off eastern USA)

STEIN, M. (Federal Republic Germany)

SCR 89/ 3 (ocean temperature predictability at W Greenland)
57 (scales of variability in W Greenland waters)
58 (recent observations on deep waters, W Greenland)

STEVENSON, D. K. (USA)

SCR 89/ 95 (G. of Maine shrimp stock: research and assessment)

STROUT, G. A. (USA)

SCR 89/ 63 (variation in shelf water front off NE USA, 1988)

[T]

TERCEIRO, M. (USA)

SCR 89/ 98 (Shepherd length analysis: G. of Maine shrimp data)

TEVS, I. I. (USSR)

SCR 89/ 10 (overview of oceanography off NW Atlantic in 1988)
86 (G. halibut stock, fecundity: NW Atlantic 1969-88)
87 (bottom water effects on SA 3 fish distr. density)

TIZOL, R. (Cuba)

SCR 89/ 2 (S. hake fishery, biology in Div. 4W, 1986-87)

TORHEIM, S. (Norway)

SCR 89/ 18 (Norwegian shrimp study in E Greenland, 1988)

TRITES, R. W. (Canada)

SCR 89/ 67 (overview of NAFO environmental conditions, 1988)

TROYANOVSKY, F. M. (USSR)

SCR 89/ 83 (nature of non-maturing redfish in NW Atlantic)

TUROK, V. F. (USSR)

SCR 89/ 16 (S. hake, other fish, squid in Div. 4VWX in 1988)

[U]

UOZUMI, Y. (Japan)

SCS 89/ 13 (Japanese research report for 1988)

[V]

VASKOV, A. A. (USSR)

SCR 89/ 6 (redfish stock status and TAC 1990 in Div. 3M+3LN)

VAZQUEZ, A. (Spain)

SCR 89/ 60 (bottom-trawl survey results, Flemish Cap 1988)
SCS 89/ 16 (Spanish research report for 1988)

VEITCH, P. J. (Canada)

SCR 89/ 28 (new Canadian shrimp fishery in Div. 0B in 1988)
29 (Canadian shrimp fishery in Div. 0A in 1988)

[W]

WALDRON, D. E. (Canada)

SCR 89/ 48 (S hake population size Div. 4VWX 1988, proj. 1990)
81 (cannibalism on S hake population-status, Div. 4VWX)

WALSH, S. J. (Canada)

SCR 89/ 46 (fish capture process of groundfish survey trawl)
47 (A. plaice selectivity: square vs diamond codends)
68 (assessment of yellowtail flounder in Div. 3LNO)
71 (juvenile A. plaice distribution in Div. 3LNO)

WEGNER, G. (Federal Republic Germany)

SCR 89/ 58 (recent observations on deep waters, W Greenland)

WELLS, R. (Canada)

SCR 89/ 80 (fish populations on the Flemish Cap)

[Y]

YATSU, A. (Japan)

SCR 89/ 30 (groundfish biomass, 1988 trawl survey W Greenland)
31 (G. halibut distribution and biology W Greenland)