

INTERNATIONAL COMMISSION
FOR THE
NORTHWEST ATLANTIC FISHERIES



ANNUAL REPORT
(formerly Annual Proceedings)

Vol. 27
for the year
1976/77

Dartmouth • Canada
1977



6.9.78 195
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127

ISSN 0303 - 4151

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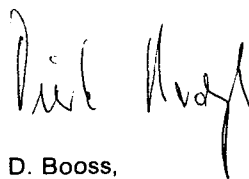
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Letter of Transmittal

The Chairman of the International Commission for the Northwest Atlantic Fisheries presents his compliments to the Governments signatory of the International Convention for the Northwest Atlantic Fisheries signed at Washington under date of 8 February 1949, and to the Commissioners and Observers representing those Governments and has the honour to transmit herewith annual reports of the International Commission for the Northwest Atlantic Fisheries for the year 1976/77.

This is the 27th annual report of proceedings of the Commission and is an authoritative record of its activities and achievements from 1 July 1976 to 30 June 1977. The report contains an account of the activities of the Commission's Secretariat; an account of the Ninth Special Commission Meeting, December 1976; an account of the 27th Annual Meeting, June 1977; and summaries of research carried out in each of the five Convention subareas and on seals in 1976.

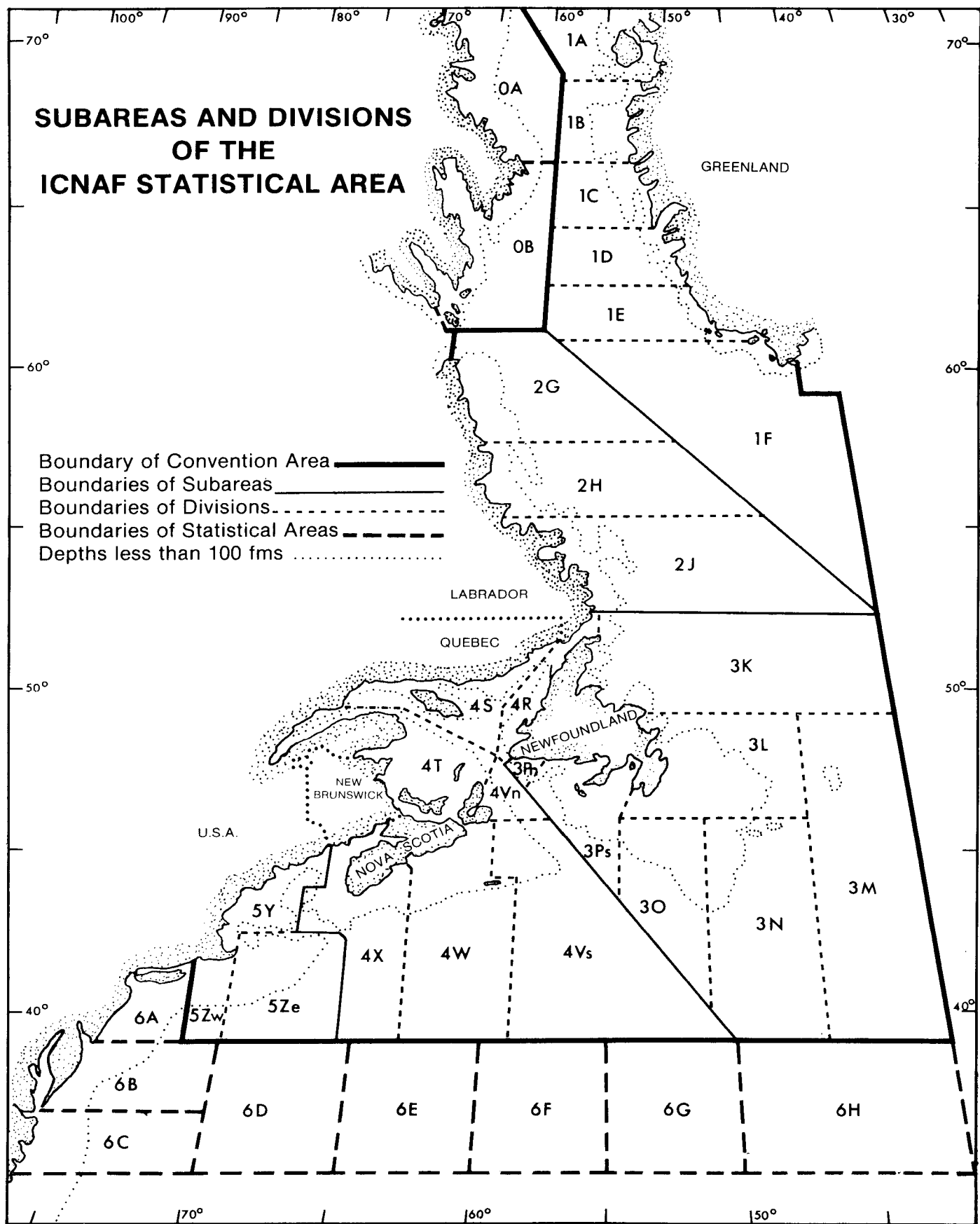
This report is prepared and transmitted in conformity with the requirements of Article VI(1) (f) of the International Convention for the Northwest Atlantic Fisheries and Rules 3.2 (g) and 9.1 of the Rules of Procedure of the Commission.

A handwritten signature in dark ink, appearing to read 'D. Booss', is positioned above the printed name and title.

D. Booss,
Chairman,
International Commission for the
Northwest Atlantic Fisheries

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Commission's Organization, 1976/77

Participating Governments

Bulgaria, Canada, Cuba, Denmark, France, Federal Republic of Germany, German Democratic Republic, Iceland, Italy, Japan, Norway, Poland, Portugal, Romania, Spain, Union of Soviet Socialist Republics, United Kingdom, and United States of America (to 31 December 1976).

Chairman of Commission

Mr E. Gillett,
Dept. of Agriculture
and Fisheries,
Chesser House, Gorgie Road,
Edinburgh EH11 3AW,
Scotland.
(to 1 December 1976)

Vice-Chairman of Commission

Dr D. Booss,
Bundesministerium für Ernährung,
Landwirtschaft und Forsten,
Rochusstrasse 1,
5300 Bonn-Duisdorf,
Federal Republic of Germany.
(to 1 December 1976)

Dr D. Booss,
Bundesministerium für Ernährung,
Landwirtschaft und Forsten,
Rochusstrasse 1,
5300 Bonn-Duisdorf,
Federal Republic of Germany.
(from 1 December 1976)

Panels for the Subareas

Subarea	Panel	Member Governments	Chairman
1	1	Denmark, France, Federal Republic of Germany, Norway, Poland, Portugal, Spain, Union of Soviet Socialist Republics, United Kingdom.	Mr V. M. Kamentsev, Ministry of Fisheries, 12 Rozhdestvensky Boulevard, Moscow K-45, USSR.
2	2	Canada, Cuba, France, Federal Republic of Germany, German Democratic Republic, Iceland, Norway, Poland, Portugal, Romania, Spain, Union of Soviet Socialist Republics, United Kingdom.	Mr W. Kalinowski, Fisheries Central Board, Str Odrowaza 1, 70-952 Szczecin, Poland.
3	3	Bulgaria, Canada, Cuba, Denmark, France, Federal Republic of Germany (effective 1 June 1977), German Democratic Republic, Iceland, Italy (effective 1 June 1977), Japan, Norway, Poland, Portugal, Romania, Spain, Union of Soviet Socialist Republics, United Kingdom, United States of America (to 31 December 1976).	Mr R. H. Letaconnoux, Institut Scientifique et Technique des Pêches Maritimes B.P. 1049, 44037 Nantes-CEDEX, France.
4	4	Bulgaria, Canada, Cuba, Denmark, France, Federal Republic of Germany, Japan, Poland, Portugal, Spain, Union of Soviet Socialist Republics, United States of America (to 31 December 1976).	Mr K. Løkkegaard, Ministry of Fisheries, Borgergade 16, 1300 Copenhagen K, Denmark.
5	5	Bulgaria, Canada, Cuba, France, Federal Republic of Germany (to 1 June 1977), German Democratic Republic, Italy (to 1 June 1977), Japan, Poland, Romania, Spain, Union of Soviet Socialist Republics, United States of America (to 31 December 1976).	Dr J. A. Storer, Office of Marine Resources, NOAA, 1010 Executive Boulevard, Rockville, Maryland, USA 20028. (to 31 December 1976)

Panel for Harp and Hooded Seals

A	Canada, Denmark, Norway.	Mr E. Lemche, Ministry for Greenland, Hausergade 3, DK-1128 Copenhagen K, Denmark.
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Commission's Organization, 1976/77 (continued)

Standing Committees

Committees	Members	Chairman
On Finance and Administration	One Nominee from each of the Contracting Governments (Canada, Federal Republic of Germany, Portugal [effective 31 May 1977], Union of Soviet Socialist Republics, United Kingdom, United States of America (to 31 December 1976)).	Mr E. B. Young, International Directorate, Fisheries and Marine Service, Department of Fisheries and Environment, 580 Booth Street, Ottawa, Ontario, Canada K1A 0H3.
On Research and Statistics	One Nominee from each Contracting Government who may be assisted by experts and advisers.	Dr M. D. Grosslein, Northeast Fisheries Center, National Marine Fisheries Service, Woods Hole, Massachusetts, USA 02543. (to 31 December 1976) Mr Sv. Aa. Horsted Gronlands Fiskeriundersogelser, Jaegersborg Alle 1B, 2920 Charlottenlund, Denmark. and Dr F. Nagasaki, Far Seas Fisheries Research Laboratory, 1000 Orido, Shimizu, Shizuoka, Japan. (from 24 May 1977)
On Regulatory Measures	One Nominee from each Contracting Government who may be assisted by experts and advisers.	(Vacant)
On International Control	One Nominee from each Contracting Government who may be assisted by experts and advisers.	Mr W. G. Gordon, Northeast Region, National Marine Fisheries Service, Gloucester, Massachusetts, USA 01930. (to 31 December 1976) Mr D. R. Bollivar, Resource Allocation Branch, Fisheries and Marine Service, Department of Fisheries and Environment, 580 Booth Street, Ottawa, Ontario, Canada K1A 0H3 (effective 31 May 1977)

Headquarters

Dartmouth, Nova Scotia, Canada

Executive Secretary Assistant Executive Secretary Administrative Assistant Bio-Statistician Senior Secretary Senior Statistical Clerk Finance and Publications Clerk Steno	— Mr L. R. Day — Mr V. M. Hodder — Mr W. H. Champion — Mr S. A. Akenhead (SOS 31 August 1976) — Mrs V. C. Kerr — Mr G. M. Moulton — Ms E. R. Cornford	Statistical Clerk (Surveys and Sampling) Statistical Clerk (Fishery Statistics) Clerk-Duplicator Operator Clerk-Duplicator Operator Documents and Mailing Clerk Clerk Typist Data Processing Clerk	— Ms P. A. Cave — Mr F. D. Keating — Mr R. A. Myers — Mr B. T. Crawford — Mrs F. E. Perry — Mrs P. M. Wadman — Miss G. H. Langille
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PART 1

Administrative Report for the Year Ended 30 June 1977

1. The Future of ICNAF

At the Annual Meeting of the Commission in June 1976, the delegations of Canada and USA announced their intention to extend jurisdiction over fisheries to 200 miles offshore effective 1 January 1977 and 1 March 1977, respectively. As a consequence, the Commission designated a Group of Experts who met from 5 to 7 October 1976 and formulated suggestions regarding future multilateral cooperation in fisheries in the Northwest Atlantic Ocean (*Com. Doc. 76/XII/64*).

In view of the impending jurisdictional changes and the Commission's procedure which allows Member States to lodge objection to measures agreed by the Commission, Canada and USA, in accordance with Convention Article XVI, served notice on 29 June 1976 and 22 June 1976, respectively, of their intent to withdraw from membership in the Commission on 31 December 1976. Canada revoked her intention on 28 December 1976. The US withdrawal became effective 31 December 1976, thereby reducing to 17 the membership in the Commission.

At its Ninth Special Meeting in December 1976, the Commission, recognizing the pending extension of fisheries jurisdiction to 200 miles offshore, adopted amendments to the Convention which would provide an interim solution pending further consideration of future multilateral cooperation and recommended that action be taken as soon as possible in the first half of 1977 to pursue the development of a framework for such future cooperation, including appropriate institutional arrangements (*Sum. Doc. 77/VI/2*).

At the invitation of the Government of Canada, delegates of the 17 ICNAF Member Countries, the USA, and the European Economic Community participated in a preparatory conference in March 1977 (*Sum. Doc. 77/VI/11*) and discussed in detail a draft Convention which had been prepared by Canada in an effort to suggest a firm basis in treaty law for the continuation of multilateral cooperation in the North Atlantic fisheries within the framework of the new regime of extended coastal state jurisdiction. The Conference agreed that, in conjunction with the Annual Meeting of ICNAF in June 1977, a second preparatory meeting should be held which would give further consideration to the functions, competence and responsibilities of the proposed Fisheries Commission, provisions respecting the financing of the proposed new Organization and arrangements for

a smooth transition from the ICNAF regime to the proposed new multilateral arrangements. The Conference received with favour the invitation of the Government of Canada to host a diplomatic conference in Ottawa from 11 to 21 October 1977 to consider the adoption of a new Convention.

2. The Commission's Officers

Chairman of the Commission	— Mr E. Gillett (UK) to December 1976 — Dr D. Booss (Federal Republic of Germany) from December 1976
Vice-Chairman of the Commission	— Mr D. H. Wallace (USA) to June 1976 — Dr D. Booss (Federal Republic of Germany) from June 1976 — Vacant from December 1976
Chairman of Panel 1	— Mr V. M. Kamentsev (USSR)
Chairman of Panel 2	— Mr W. Kalinowski (Poland)
Chairman of Panel 3	— Mr R. H. Letaconnoux (France)
Chairman of Panel 4	— Mr K. Løkkegaard (Denmark)
Chairman of Panel 5	— Dr J. A. Storer (USA) to December 1976 — Vacant from December 1976
Chairman of Panel A (Seals)	— Mr E. Lemche (Denmark)

The Chairman and Vice-Chairman of the Commission hold office for a 2-year period. Dr D. Booss (Federal Republic of Germany) is completing the term of office, 1975-77, of Mr E. Gillett (UK). The office of Vice-Chairman became vacant when Dr D. Booss became Chairman on Mr Gillett's retirement from the Commission. Elections for both Chairman and Vice-Chairman of the Commission for the period 1977-79 will be held at the Annual Meeting, June 1977.

The chairmanship of Panel 5 became vacant with the withdrawal of USA from the Commission on 31 December 1976. Elections for Chairmen of Panels will be held, as required, at the Annual Meeting, June 1977, with the exception of the Chairman of Panel A (Seals) who will complete his 2-year term of office in 1978.

Chairman of the Standing Committee on Research and Statistics (STACRES)	— Dr M. D. Grosslein (USA) to 31 December 1976 — Vacant from 1 January 1977
Chairman of the Standing Committee on Finance and Administration (STACFAD)	— Mr E. B. Young (Canada)
Chairman of the Standing Committee on Regulatory Measures (STACREM)	— Vacant from March 1976

Chairman of the Standing Committee on International Control (STACTIC)

- Mr W. G. Gordon (USA) to 31 December 1976
- Mr D. R. Bollivar (Canada) from 31 May 1977

3. Panel Membership for 1976/77

Country	Panel						Total
	1	2	3	4	5	A	
Bulgaria	—	—	1974	1975	1973	—	3
Canada	—	1952	1951	1951	1951	1966	5
Cuba	—	1976	1976	1976	1976	—	4
Denmark	1951	—	1969	1974	—	1966	4
France	1953	1953	1953	1953	1974	—	5
Federal Republic of Germany	1957	1960	1977 ^a	1970	—	—	4
German Democratic Republic	—	1974	1974	—	1974	—	3
Iceland	—	1974	1976	—	—	—	2
Italy	—	—	1977 ^a	—	—	—	1
Japan	—	—	1971	1971	1971	—	3
Norway	1952	1970	1968	—	—	1966	4
Poland	1962	1962	1962	1968	1968	—	5
Portugal	1953	1953	1953	1953	—	—	4
Romania	—	1970	1970	—	1967	—	3
Spain	1952	1954	1952	1952	1972	—	5
USSR	1958	1958	1958	1962	1962	—	5
UK	1951	1960	1951	—	—	—	3
USA ^b	—	—	(1952) ^b (1951) ^b (1951) ^b	—	—	—	(3) ^b
Total	9	13	17	11	10	3	63

^a Transferred membership from Panel 5 to Panel 3, effective 1 June 1977.

^b USA withdrew from membership in the Commission, effective 31 December 1976. Panel memberships total 63, effective 1 January 1977.

4. The Commission's Secretariat

Executive Secretary	— Mr L. R. Day
Assistant Executive Secretary	— Mr V. M. Hodder
Bio-Statistician	— Mr S. A. Akenhead (SOS 31 August 1976)
Administrative Assistant	— Mr W. H. Champion
Senior Secretary	— Mrs V. C. Kerr
Finance and Publications Clerk Steno	— Ms E. R. Cornford
Senior Statistical Clerk	— Mr G. M. Moulton
Clerk-Duplicator Operator	— Mr R. A. Myers
Clerk-Duplicator Operator	— Mr B. T. Crawford
Statistical Clerk (Surveys and Sampling)	— Ms P. A. Cave
Documents and Mailing Clerk	— Mrs F. E. Perry
Clerk-Typist	— Mrs P. M. Wadman
Statistical Clerk (Fishery Statistics)	— Mr F. D. Keating
Data Processing Clerk	— Miss G. H. Langille

Activities of the staff

The Executive Secretary participated in a panel on international fisheries management sponsored by the American Fisheries Society (Dearborn, Michigan,

USA, 20 September 1976); participated in meetings of the Group of Experts on the Future of ICNAF (Ottawa, 5–7 October 1976); serviced meetings of Scientific Advisers to Panel A (Seals) and of Panel A (Seals) (Copenhagen, 11–14 October 1976); serviced with Messrs Hodder and Moulton, Ms Kerr and Cornford the Ninth Special Commission Meeting (Tenerife, Canary Islands, 24 November–9 December 1976); discussed proposals from the Ninth Special Commission Meeting with Depositary Government (Washington, D.C., 16 December 1976); discussed, at the invitation of the Canadian Government, drafting items for the preparation of new multilateral arrangements for the Northwest Atlantic fisheries (Ottawa, 4 March 1977); participated in and serviced with Mr Hodder and Ms Cornford the International Preparatory Conference on Future Multilateral Cooperation in the Northwest Atlantic Fisheries (Ottawa, 14–25 March 1977); serviced with the other members of the Secretariat the ICNAF Assessments Subcommittee Meetings (Dartmouth, 19–27 April 1977).

The Assistant Executive Secretary, Mr Hodder, attended the ICES Annual Meeting (Copenhagen, 2–8 October 1976) and participated in meetings of the ICES/ICNAF/IOC Coordinating Group on the North Atlantic (Copenhagen, 2 October 1976).

The Administrative Assistant, Mr Champion, discussed preparations for the 1977 Annual Meeting with Canadian Government officials (Ottawa, 28 March 1977).

5. The Commission's Publications

One of the major responsibilities of the Secretariat is publication of the results of the Commission's work. Serial publications for wide distribution to a mailing list of over 1,000 addresses in 56 countries include the *Annual Report*, the *Statistical Bulletin*, the *Special Publications*, the *Selected Papers*, the *Research Bulletin*, and the *List of Fishing Vessels*. In-house publications include the *Meeting Proceedings*, the *Redbook*, the *Sampling Yearbook*, and the *ICNAF Handbook*, and have a limited distribution to participants, both persons and institutions, in the Commission's scientific and management programs. In addition, the Secretariat produces various document series, the *Commissioners Document (Com. Doc.)* series, the *Summary Document (Sum. Doc.)* series, the *Research Document (Res. Doc.)* series, and the Circular Letter (C L) series. To implement the Commission's publishing and printing requirements, the Secretariat operates a well-equipped and modern reproduction facility capable of typing, printing, collating, and distributing

publications and documents quickly, economically, while at the same time maintaining a high quality finished product.

In the year 1976/77 the Secretariat printed and distributed approximately three million pages of print (1.5 million sheets of paper) including the following:

The *Proceedings of the Seventh Special Meeting (September 1975)*, the *Eighth Special Meeting (January 1976)*, and the *26th Annual Meeting (June 1976)* (304 p.) was distributed in October 1976.

The *Annual Report (formerly Annual Proceedings) Vol. 25 for 1974/75* (116 p.), containing the Administrative Report and Financial Statements for the fiscal year ending 30 June 1975, the Reports of the Fifth Special Meeting, November 1974, the Sixth Special Meeting, January 1975, the Joint ICNAF/NEAFC Meeting on Joint International Enforcement, March 1975, the 25th Annual Meeting, June 1975, and the Summaries of Research and Status of Fisheries for Subareas and Seals, 1974, was distributed in July 1976.

The *Annual Report (formerly Annual Proceedings) Vol. 26 for 1975/76* (139 p.), containing the Administrative Report and Financial Statements for the fiscal year ending 30 June 1976, the Reports of the Seventh Special Meeting, September 1975, the Eighth Special Meeting, January 1976, the 26th Annual Meeting, June 1976, and the Summaries of Research and Status of Fisheries for Subareas and Seals, 1975, was distributed in July 1977.

The *Redbook 1976* (219 p.), containing the Reports of the Standing Committee on Research and Statistics (STACRES) for September 1975, January 1976, May-June 1976, and the Reports of the Scientific Advisers to Panels 1-5 for May-June 1976, to Panel A (Seals) for November 1975 and December 1975, was distributed in August 1976.

The *ICNAF International Inspection Scheme - Translations of Questionnaire and Report of Inspection (Revised 1976)* (101 p.) was distributed in September 1976.

The *Research Bulletin of ICNAF No. 12* (138 p.), containing seven scientific contributions, two review papers, and a note, was distributed in October 1976.

The *Statistical Bulletin Vol. 25 for the year 1975* (234 p.), containing tabular summaries of fish and seal catches 1961-75, and eight tables of catch and effort statistics for fish and seals, 1975, was distributed in February 1977.

The *Selected Papers of ICNAF No. 2* (204 p.), containing 12 scientific papers, was distributed in March 1977.

The *Report of the Third Meeting of the ICES/ICNAF/IOC Coordinating Working Group for the North Atlantic, with Representatives of International Marine Research Projects in the North Atlantic, October 1976*, (13 p.) was distributed as ICNAF Sum. Doc. 77/VI/21.

The *Report of Special Meeting of Panel A (Seals) and Scientific Advisers, October 1976*, (15 p.) was distributed as ICNAF Sum. Doc. 76/XII/47.

The *Proceedings of the Ninth Special Commission Meeting, December 1976*, (110 p.) and the *Report of the Standing Committee on Research and Statistics (STACRES), December 1976*, (28 p.) were distributed as ICNAF Sum. Doc. 77/VI/2 and 77/VI/1, respectively.

The preliminary *Report of the Ageing Workshop on Cod, January-February 1977*, (54 p.) was distributed as ICNAF Sum. Doc. 77/VI/12.

The *Report of the Silver Hake Ageing Workshop, March 1977*, (15 p.) was distributed as ICNAF Sum. Doc. 77/VI/13.

The *Report of the First International Preparatory Conference on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, March 1977*, (58 p.) was distributed as ICNAF Com. Doc. 77/VI/11.

The *Report of the Assessments Subcommittee of STACRES, April 1977*, (16 p.) was distributed as ICNAF Sum. Doc. 77/VI/16.

The *ICNAF Fishery Regulations, as at February 1977*, (63 p.) were issued as ICNAF Com. Doc. 77/VI/1.

The *Status of Commission Proposals for Changes in the Convention and for International Regulation of Fisheries under the Convention, as at May 1977*, (28 p.) was issued as ICNAF Com. Doc. 77/VI/7.

The *ICNAF List of Fishing Vessels, 50 GRT and over, 1975*, (32 p.) was issued as ICNAF Sum. Doc. 77/VI/4.

The *ICNAF List of Sampling Data for 1975* (28 p.) was issued as ICNAF Sum. Doc. 77/VI/5.

The Secretariat's program for reprinting out-of-stock ICNAF publications was continued. One hundred copies of each of the following have been made available to meet the future and growing

requests for Commission publications: *Redbook* 1972, Part I; 1970, Part I; 1969, Part II; 1968, Parts I and III; 1967, Part II; 1963, Parts II and III; 1962, Part I; *Sampling Yearbook* Vol. 13, Part I; Vol. 10 and Vol. 4.

6. The Commission's Research and Statistics Program

a) Catch and effort statistics

Following the adoption by the Commission of Resolution (2) at the 1975 Annual Meeting, the Secretariat in cooperation with the Secretary of the Coordinating Working Party on Atlantic Fisheries Statistics (CWP) modified the STATLANT 21B form to allow for the reporting of detailed catch and effort statistics by 30' x 30' unit areas and twice-monthly time periods. The revised form was approved by STACRES at the 1976 Annual Meeting. Supplies of the new form, with appropriate instructions for its completion, were distributed to Member Countries in early February 1977 for the use of national statistical offices in reporting catch and effort data for the calendar year 1976. Preparatory to instituting the revised STATLANT 21B form, Member Countries were advised by Circular Letter December 1974 of the proposed reporting requirements so that their statistical offices could plan to collect the statistics in the detail recommended. Member Countries were provided with further information on the proposed detailed reporting requirements at the 1975 Annual Meeting (*Sum. Doc. 75/14, 75/21*), and Circular Letter 76/75 issued in December 1976 provided advance notice of the adopted changes in the new form to be used for reporting 1976 data. Since the deadline for submitting the new STATLANT 21B returns is 30 June 1977, it is too early to comment on the extent to which Member Countries have implemented the more detailed reporting procedures for 1976 data.

b) Statistical Bulletin, Vol. 25 for 1975

Pending the publication of *Statistical Bulletin* Vol. 25, provisional statistics of 1975 nominal catches in the Northwest Atlantic, as derived from STATLANT 21A returns and other advance reports, were compiled in the format of Tables 1, 2, and 3 of Statistical Bulletin and circulated in July 1976. Much of the delay from the 30 June deadline for the receipt of detailed catch and effort data and the actual printing of the Statistical Bulletin about 6 months later continues to be due to the late submission of STATLANT 21B statistics by a few countries. The arrangement of the tabular material in Vol. 25, issued in January 1977, is essentially the same as that used following the major reorganization of the

tables in Vol. 22. After the publication of Vol. 25, detailed catch and effort statistics for 1975 were received from Ireland and these are given as a supplement to the Bulletin in *Sum. Doc. 77/VI/3*.

c) Advance statistics

Continuing a program, initiated at the request of STACRES early in 1974, requiring the reporting of preliminary catch statistics and sampling data by month and division for selected species in advance of the April Meeting of the Assessments Subcommittee, the Secretariat made special requests to national scientists to ensure that all biostatistical data relevant to species under catch regulation in 1976 be forwarded to designated scientists and to the Secretariat well in advance of the April 1977 Meeting. As in 1974, 1975, and 1976, the response to requests for sampling data from research institutes was very encouraging, although there still remain major gaps in the availability of data for certain fish stocks. However, the nominal catch statistics, which are usually compiled in national statistical offices, were, with few exceptions, not available until the April 1977 Meeting was in progress and even then, much of the data were not provided in the format required. Consequently, the designated scientists were hampered in performing their pre-meeting assessment tasks, much of which had to be undertaken during the progress of the meeting. This lack of attention to STACRES requirements continues despite the fact that the Commission has persistently urged Member Countries to provide their national statistical offices and their research institutes with the facilities necessary to collect and report promptly to the Secretariat such detailed data as are required to improve the base for the analytical assessment of all stocks subject to conservation measures.

d) Sampling Yearbook, Vol. 20 for 1975

Following the decision by STACRES to discontinue the publication of detailed sampling data after the issue of *Sampling Yearbook* Vol. 17 for the year 1972, subsequent volumes of the Yearbook contain lists of all available length and age data submitted to the Secretariat. In addition, Vol. 19 for 1974 contains a synopsis of the ICNAF Sampling Program outlining the requirements that Member Countries are expected to follow in the collection and submission of sampling data to the Secretariat. Pending the final compilation of sampling data for 1975 for presentation in Vol. 20, the publication of which has been delayed due to the volume of data being prepared for computer processing, a provisional list of 1975 data was issued in *Sum. Doc. 77/VI/5*. Volume 20 will be

ready for distribution in January 1978.

e) Computerized sampling data base

In order to facilitate the rapid retrieval of sampling data for distribution to scientists involved in the Commission's work, a considerable amount of time has been spent during the past two years in setting up a computerized retrieval system and in organizing the large volume of data available for 1973-75. Much work of an exploratory nature was undertaken during 1975/76 in preparing the data in a standard format for computer input and experimenting with various methods of retrieval. During the past year, a concerted effort was made to upgrade the data-processing procedures: nearly all of the 1973-75 data have been punched on computer cards and computer programs prepared for data retrieval. Final editing of the 1973-75 data is expected to be completed in about 2 months, following which computer printouts or magnetic tapes of the data can be distributed upon request to scientists or research institutes.

f) Data-processing facilities

The installation of a remote job entry terminal in early 1976, providing the Secretariat with direct access to an IBM 370/155 computer and to a CDC 6400 computer, proved to be invaluable to the small Secretariat staff in providing support to STACRES and its Subcommittees and Working Groups, especially during the Mid-term Meetings of the Assessments Subcommittee which have been held at ICNAF Headquarters in April of 1976 and 1977. However, the data-processing capabilities at the Secretariat has been hampered somewhat by the resignation of Mr Akenhead, Biostatistician, in August 1976, to assume a scientific position at the Biological Station, St. John's, Newfoundland.

7. The Commission's Special Meetings

The *Group of Experts on the Future of ICNAF* met in Ottawa, 5-7 October 1976, under the chairmanship of Dr A. W. H. Needler (Canada), to examine and formulate suggestions regarding future multilateral cooperation in the field of fisheries in the Northwest Atlantic Ocean and regarding the procedure and timing to be followed in pursuing the matter (*Com. Doc. 76/XII/64*). The Group generally agreed that a single multilateral convention should provide for management of the fisheries outside national fisheries jurisdiction and the coordination of measures taken outside national fisheries jurisdiction with those taken inside national fisheries jurisdiction by the coastal

state(s) concerned. Some experts advocated the establishment of a single commission structure similar to ICNAF, others advocated separate scientific and management bodies. The Group suggested alternate procedures for consideration by the Commission at its Ninth Special Meeting, December 1976. These were negotiation of a new Convention by a meeting of Plenipotentiaries or amend the present ICNAF Convention. The Group suggested that, as an interim measure, Convention Article VIII be amended to require the affirmative vote of the coastal state for recommendations made within national fisheries jurisdiction.

A Special Meeting of Panel A (Seals) was convened at Copenhagen on 14 October 1976, under the chairmanship of Mr E. Lemche (Denmark), to consider the report of the Scientific Advisers who met, under the chairmanship of Dr A. W. Mansfield (Canada) on 11 and 12 October 1976 to consider the relationship between seal and fish populations and conservation requirements for harp and hooded seals for 1977 (*Sum. Doc. 76/XII/47*). The Panel agreed to defer a decision on final TACs and allocations and other measures to be taken to the next meeting on 1 December 1976 in conjunction with the Ninth Special Commission Meeting.

The *Ninth Special Commission Meeting* was convened at Puerto de la Cruz, Tenerife, Canary Islands, from 1 to 9 December 1976 (*Sum. Doc. 77/VI/2*). STACRES met from 24 November to 1 December 1976 and provided advice for management on the shrimp stocks in Subarea 1, silver hake stock in Subarea 4, and mackerel stocks in Subareas 3 to 5 and Statistical Area 6 (*Sum. Doc. 77/VI/1*). Based on a review of the fishing patterns and practices of the fleets of various Member Countries by an *ad hoc* working group, the Commission agreed to a regime of open areas and seasons for herring, mackerel, silver and red hakes, and squids with bottom trawl restrictions in certain areas and periods. TACs and allocations were set for 15 stocks of shrimp and cod in Subarea 1, silver hake and flounders in Div. 4VWX, herring in parts of Subareas 4 and 5 and Statistical Area 6, butterfish, river herring, other finfish, and all finfish and squids in Subarea 5 and Statistical Area 6. A meeting of Panel A recommended conservation measures for 1977 for harp and hooded seals. In view of the extension of national fisheries jurisdiction by the coastal states in 1977, the Commission agreed to amendments to the Convention to provide for the continued functioning of the Commission pending further consideration of future multilateral cooperation, and resolved that

action be taken early in 1977 to develop a framework for such future cooperation, including institutional arrangements.

The *Ageing Workshops on Cod and Silver Hake* were convened by Mr R. Wells (Canada) at St. John's, Newfoundland, from 31 January to 5 February 1977 (Sum. Doc. 77/VI/12) and by Mr J. J. Hunt (Canada) at St. Andrews, New Brunswick, from 14 to 18 March 1977 (Sum. Doc. 77/VI/13), respectively. On the basis of the cod material examined from Div. 2J, 3K and 3L, a set of guidelines for ageing cod from this area will be published.

Meetings of the Assessments Subcommittee (Sum. Doc. 77/VI/16) of STACRES were convened at Dartmouth, Nova Scotia, from 19 to 27 April 1977 and prepared advice for 1978 at the request of Canada on 18 stocks which lie within or partly within Canada's 200-mile fisheries management zone in Subareas 2 to 4 and three stocks which overlap the Canadian and Danish fisheries zones in Statistical Area 0 and Subarea 1. The scientists also provided advice on the cod stock in Subarea 1 at the request of Denmark and the three stocks which lie completely outside of the 200-mile fishery limit in Div. 3M.

8. Status of Commission Proposals

(Com. Doc. 77/VI/7)

a) For changes in the Convention (Tabulation I)

The *1973 Protocol Relating to Basic Payment by Contracting Governments* was circulated to Contracting Governments on 21 May 1975. To date, only Canada, Cuba, France, Federal Republic of Germany, German Democratic Republic, and Norway have notified their approval. In accordance with amended Article XVII, this Protocol will take effect for all Contracting Governments 120 days following the date on the notification by the Depositary Government of receipt of written notification of approval of three-quarters (14) of all Contracting Governments, unless objected to within 90 days.

The *1976 Protocol Relating to Continued Functioning of the Commission* was adopted by the Commission on 8 December 1976, forwarded to Depositary Government on 15 December 1976, and circulated to Contracting Governments on 20 December 1976. To date, only Canada, Cuba, Denmark, German Democratic Republic, Iceland, Norway, and USSR have notified their approval.

b) For international regulation of the fisheries (Tabulation II)

June 1969 proposal (1) for regulation of Atlantic salmon fishing on the high seas in the Convention Area became effective for Norway on 31 December 1975, leaving only Denmark and Federal Republic of Germany who have not yet accepted the proposal.

January 1976 proposals (1) for amendment to the Scheme of Joint Enforcement, (2) for amendment to the management of international quota regulations, (7) for herring catch quota in Div. 4VWX, (8) for herring size limit and exemption in Subareas 4 and 5, and (9) for mackerel size limit and exemption in Subareas 3, 4, and 5, became effective on 26 August 1976, under the normal 6-month waiting procedure.

June 1976 proposals (1) for amendment of the Scheme of Joint International Enforcement (helicopter transfer of inspectors), (2) for silver hake by mesh size regulation in Subarea 4, (3) for by-catch of haddock in Div. 4V and 4W, (4) for river herring in Subarea 5 and Statistical Area 6, (5) for scallops in Div. 5Z, (6) for by-catch of haddock in Subarea 5, (7) for quota regulation of the fisheries in Subareas 2, 3, and 4 in 1976, and (8) for quota regulation of the fisheries in the Convention Area and Statistical Areas 0 and 6, since no objections were received, became effective 25 December 1976, except for proposal (5) for scallops which the Commission agreed by resolution should be implemented not later than 1 September 1976.

December 1976 proposals (1) to (10) were adopted by the Commission on 6 December 1976, transmitted to Depositary Government on 15 December 1976, and transmitted to Contracting Governments on 17 December 1976. Proposals were as follows: (1) for harp and hooded seal conservation on the "Front" and in the "Gulf" in the Convention Area; (2) for mesh size regulation of northern deepwater prawn in Subarea 1; (3) for small-mesh bottom-trawl fisheries in Div. 4VWX; (4) for area and period restrictions for silver and red hakes in Div. 5Z and Statistical Area 6; (5) for herring catch quota, area and period restrictions in Div. 5Z and Statistical Area 6; (6) for squid (*Loligo* and *Illex*) area and period restrictions in Div. 5Z and Statistical Area 6; (7) for mackerel catch quota, area and period restrictions in Subarea 5 and Statistical Area 6; (8) for repeal of fishing gear regulation in Subarea 5 and Statistical Area 6 (proposal (2) from September 1975 Special Meeting, effective 1 January 1977); (9) for squid (*Loligo* and *Illex*) re-allocation commitment for 1977 in Subarea 5 and Statistical Area 6; and (10) for

first- and second-tier catch quota regulations in the Convention Area and Statistical Area 6. Resolution (3), adopted by the June 1976 Annual Meeting, expected Contracting Governments to notify the Executive Secretary by 31 December 1976 that, subject to a similar undertaking by all other Members of the respective Panel or Panels, they would implement such proposals for the entire year 1977 and would not invoke paragraph 7(b) of Article VIII of the Convention as amended. The Executive Secretary was notified before 31 December 1976 of agreement by Bulgaria, Denmark, Federal Republic of Germany, Japan and Norway (except for northern deepwater prawn in Subarea 1); after 31 December 1976 by Canada, France, German Democratic Republic, Iceland, Italy, Portugal, Romania, Spain and UK; notifications were not received from Cuba, Poland, or USSR. Therefore, under the normal 6-month waiting procedure, the proposals, since no objections were received by Depositary Government, became effective 17 June 1977.

9. The Commission's Conservation Program

a) Catch quota reporting

In accordance with a resolution relating to the provision of monthly catch statistics adopted by the Commission on 14 June 1974, the Secretariat has received monthly catch statistics from Member Countries for each of 60 stocks under catch quota limitation as determined for 1976 at the June 1975, the September 1975, and the January 1976 Commission Meetings (*Com. Doc. 76/VI/18*). The reports were collated and distributed to all Member Countries through the ICNAF Circular Letter series within 6 weeks of each month in which the catches were made. Member Countries were informed by cable immediately (1) when, where, and how much the Member Countries without specific quotas intended to fish from the "Others" catch allocations for the various stocks, (2) when catch allocations for "Others" were reached and closure of the fishery required, and (3) when Member Countries with specific quotas advised that their quotas had been reached and their fleets had ceased fishing.

With regard to monthly catch reporting against the catch quotas set for 65 stocks for 1977 at the 1976 Annual and December 1976 Special Commission Meetings (*Com. Doc. 77/VI/1*), the Secretariat has continued to collate and distribute the monthly data as required by the June 1974 resolution.

b) Effort limitation reporting (*Com. Doc. 76/VI/18*)

With the adoption of fishing effort regulation for 1976 for groundfish in Subareas 2, 3, and 4 by the

Commission at its January 1976 Special Meeting, the Secretariat, in accordance with resolution (2) from the September 1975 Special Meeting, collated and reported within six weeks of the month in which the effort was expended, provisional monthly listings of days fished by vessel tonnage and gear category against national allocations for groundfish species in the five stock areas, Subarea 2 + Div. 3K, Div. 3LNO, Div. 3M, Div. 3P, and Div. 4VWX.

Effort limitation regulations were not adopted for 1977.

10. The Commission's Enforcement Program

All Contracting Governments have indicated readiness to have their vessels inspected under the ICNAF Scheme of Joint Enforcement. During 1976 Canada, Cuba, Denmark, France, Federal Republic of Germany, Portugal, and UK applied the Scheme in Statistical Area 6 on a voluntary basis pending domestic legislation.

The status of implementation of the Scheme and changes in inspection officers and vessels were reported by the Secretariat to Contracting Governments regularly throughout 1976 in the ICNAF Circular Letter series. All Contracting Governments, except Denmark and Iceland, designated Flag State authorities to receive immediate notice of and respond to apparent reported infringements under the Scheme. The most recent (1 June 1977) report on status of implementation, inspection officers and vessels, and designated authorities, was distributed as *Com. Doc. 77/VI/8*.

Reports of inspections by ICNAF inspectors were submitted from Canada and USA for the year 1976. Reports from Contracting Governments on national and international inspections, and infringements and their disposition for 1976, were collated and distributed to the 1977 Annual Meeting as *Com. Doc. 77/VI/9*.

In accordance with proposal (1) from the June 1975 Annual Meeting, each Contracting Government was required to submit to the Secretariat notification of the permanent and temporary fisheries research vessels it operates in the Convention Area and Statistical Areas 0 and 6, with pertinent information regarding each vessel's characteristics and program of research. Notifications were received from Canada, Cuba, Federal Republic of Germany, German Democratic Republic, Japan, Poland, USSR, and USA in 1976 (*Com. Doc. 77/VI/10, Appendix I*).

With the adoption by the Commission at the September 1975 Meeting of proposal (3) regarding

national registration of vessels engaged in fishing or in the treatment of sea fish in the Convention Area or Statistical Areas 0 and 6, as a means of improving compliance with the Commission's complex system of quota regulations, the Secretariat received reports of registrations for 1976 from all Member Countries, except Canada (Maritimes and Quebec), Denmark (Faroes), Iceland, and Portugal. The national vessel registration lists for 1976 were distributed to the 1977 Annual Meeting as *Com. Doc. 77/VI/10, Appendix II*.

11. Cooperation with Other International Organizations and with Non-Member Countries

In accordance with Convention Article X, the Secretariat, on behalf of the Commission, has sought to establish and maintain working arrangements with other public international organizations which have related objectives, particularly the Food and Agriculture Organization of the United Nations (FAO), and the International Council for the Exploration of the Sea (ICES), to ensure effective collaboration and coordination with respect to their work and, in the case of ICES, the avoidance of duplication of scientific

investigations.

Repeated efforts have been made to obtain the cooperation of non-member Countries in providing details of their fishing activities in the Convention Area. Israel, the Republic of Korea, Greece, Ireland, and Nigeria have fished in the Area in 1976.

12. Financial Statements for the Fiscal Year Ended 30 June 1977

The accounts of the Commission for the year ended 30 June 1977 showed that Can \$368,500 was appropriated by the Commission for ordinary expenditures. This amount included a surplus appropriation of \$6,449 to the Working Capital Fund.

Obligations incurred during the fiscal year totalled Can \$362,051.

In accordance with the Financial Regulations of the Commission, an audit of the Commission's finances was completed on 11 August 1977 by the Office of the Auditor General of Canada. The report of the Auditor General reads, in part, as follows:

EXHIBIT I

Statement of Budget Appropriations, Obligations Incurred, and Balances of Appropriations for the year ended 30 June 1977

(Expressed in Canadian dollars)

Purposes of Appropriations	Appropriated by Commission	Obligations Incurred	Surplus or Deficit (-) Balances of Appropriations
Personal services:			
Salaries	\$ 197,000	\$ 183,957	\$ 13,043
Salary contingencies	17,000	20,202	- 3,202
Employee benefits	14,500	14,572	- 72
Additional help	2,000	10,000	- 8,000
Travel	5,500	4,633	867
Transportation	1,500	506	994
Communication services	20,000	19,714	286
Publications	22,000	15,247	6,753
Other contractual services	20,000	19,343	657
Materials and supplies	9,000	10,297	- 1,297
Equipment	5,000	3,611	1,389
Annual and mid-term meetings	20,000	33,491	- 13,491
Computer services	25,000	26,478	- 1,478
Contingencies	10,000	—	10,000
	368,500	362,051	6,449
Surplus Appropriation to Working Capital Fund	6,449	—	6,449
	<u>\$ 362,051</u>	<u>\$ 362,051</u>	<u>—</u>

EXHIBIT II — GENERAL FUND

Statement of Income and Expenditure for the year ended 30 June 1977

(Expressed in Canadian dollars)

	1977	1976
Income (and Source of Funds):		
Members' contributions assessed:		
Bulgaria	\$ 14,347	\$ 13,592
Canada	23,582	22,307
Cuba	18,965	—
Denmark	18,965	17,950
France	23,582	22,307
Federal Republic of Germany	18,965	17,950
German Democratic Republic	14,347	13,592
Iceland	9,729	9,234
Italy	5,112	4,876
Japan	14,347	13,592
Norway	18,965	17,950
Poland	23,582	22,307
Portugal	18,965	17,950
Romania	14,347	13,592
Spain	23,582	22,307
Union of Soviet Socialist Republics	23,582	22,307
United Kingdom	14,347	13,592
United States of America	14,347	13,592
	313,658	278,997
Transferred from Miscellaneous Fund	54,842	31,003
Transferred from Working Capital Fund	—	14,000
	368,500	324,000
Obligations incurred (Exhibit I)	362,051	324,000
Amount available for transfer to Working Capital Fund	\$ 6,449	\$ —

EXHIBIT III

Statement of Assets and Liabilities as at 30 June 1977

(Expressed in Canadian dollars)

Assets			Liabilities		
	1977	1976		1977	1976
General Fund					
Cash on hand and in bank			Cash overdraft (Appendix I)	\$ 12,951	\$ 26,136
(Appendix I)	\$ —	\$ —	Unliquidated obligations	21,519	15,704
Accounts receivable	677	1,102	Credit due to Member Governments	8,784	9,037
Due from Member Governments	42,577	49,775			
	\$ 43,254	\$ 50,877		\$ 43,254	\$ 50,877
Working Capital Fund					
Cash on deposit	\$ 21,863	\$ 2,158	Principal of Fund (Appendix 2)	\$ 44,773	\$ 27,244
Certificates of deposit	20,000	20,000		\$ 44,773	\$ 27,244
Accrued interest	850	790			
Accounts receivable	2,060	4,296	Principal of Fund (Appendix 2)	\$ 40,534	\$ 54,842
	\$ 44,773	\$ 27,244		\$ 40,534	\$ 54,842
Miscellaneous Fund					
Cash on deposit	\$ 40,534	\$ 54,842			
	\$ 40,534	\$ 54,842			

APPENDIX 1

Statement of Changes in Financial Position for the year ended 30 June 1977

General Fund

Cash overdraft, 30 June 1976		\$ 26,136
Add: Member Government contributions:		
Assessments 1976/77	313,658	
Transfer from Miscellaneous Fund for 1976/77 appropriations	54,842	
Decrease in amounts due from Member Governments	7,198	
Decrease in accounts receivable	425	
		<u>376,123</u>
		<u>349,987</u>
Deduct: Obligations liquidated:		
Unliquidated 30 June 1976	15,704	
Obligations incurred	362,051	
	<u>377,755</u>	
Unliquidated 30 June 1977	21,519	
	<u>356,236</u>	
Decrease in credit due to Member Governments	253	
Transfer to Working Capital Fund	6,449	
		<u>362,938</u>
Cash overdraft, 30 June 1977		<u>\$ 12,951</u>

APPENDIX 2

Working Capital Fund

Balance, 30 June 1976		\$ 27,244
Add: Bank interest	6,376	
Interest on certificates of deposit	1,988	
Sales of publications	2,716	
Surplus appropriation from General Fund	6,449	
		<u>17,529</u>
Balance, 30 June 1977		<u>\$ 44,773</u>

Miscellaneous Fund

Balance, 30 June 1976		\$ 54,842
Appropriated for 1976-77 obligations		<u>54,842</u>
		<u>—</u>
Add: <i>Ex gratia</i> Grant — 1975 provincial income taxes	10,338	
Staff assessments 1976-77	30,196	
Balance, 30 June 1977		<u>\$ 40,534</u>