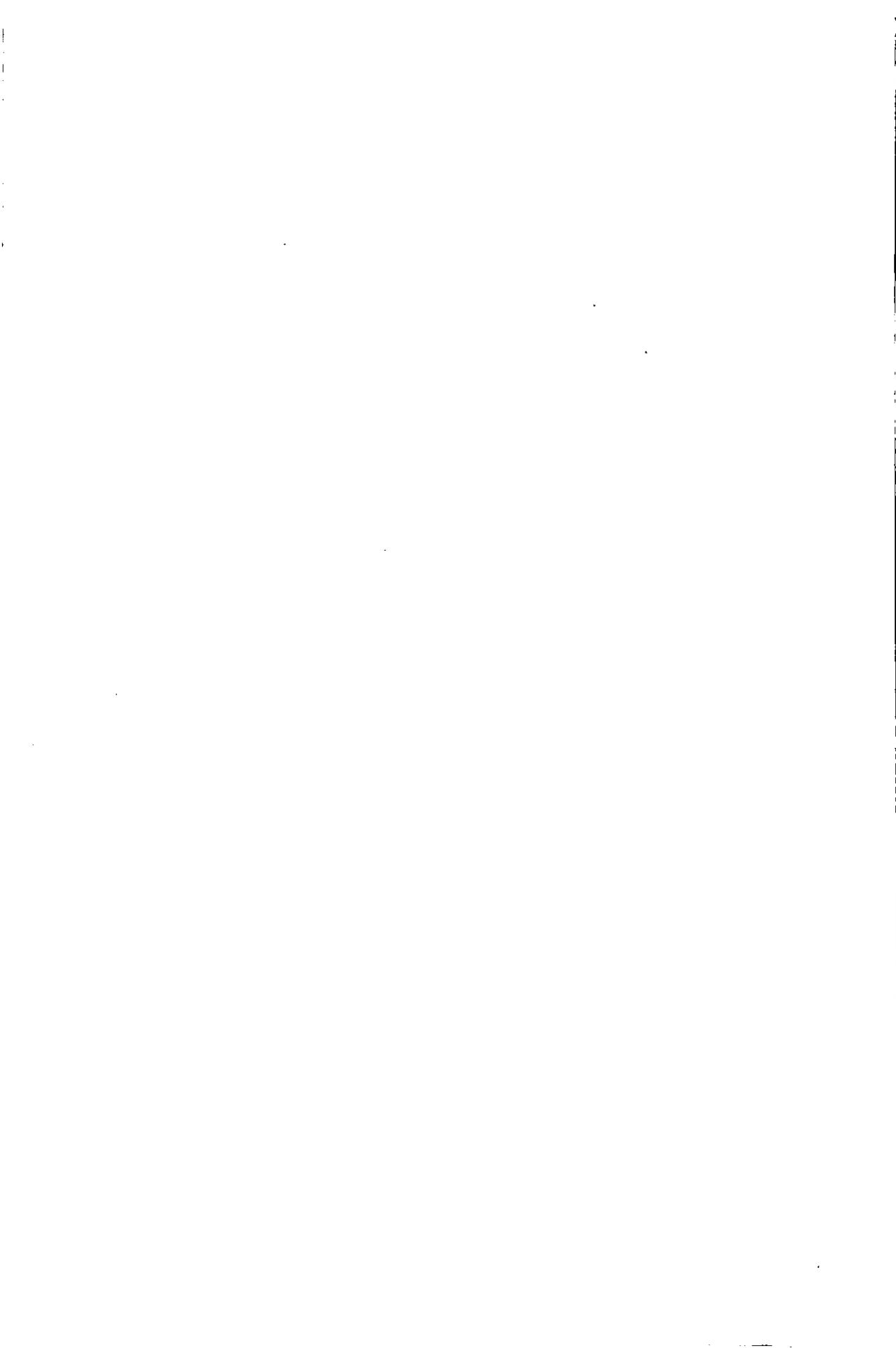


Northwest Atlantic Fisheries Organization (NAFO)



Annual Report
1991

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Preface

This Annual Report for the year 1991 is submitted to the Contracting Parties of NAFO in accordance with the provisions of Article V.4 of the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries. The Report consists of four Parts that reflect the annual activities of NAFO's constituent bodies – the General Council, the Fisheries Commission, the Scientific Council, and the Secretariat as the summary proceedings and decisions through 1991. Full reports of all NAFO meetings during the year are published in one separate edition – Proceedings of NAFO Meetings for the year 1991.



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* Note: Since the results of this Meeting held at the end of 1990 were very important for the Fisheries Commission activities in 1991, a brief summary of the decisions of the Meeting is included in the Annual Report for 1991.

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Introduction

The Northwest Atlantic Fisheries Organization (NAFO) operates under the provisions of the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries signed in Ottawa, Canada, on 24 October 1978. The Convention entered in force on 1 January 1979 after subsequent members: Canada, Cuba, European Economic Community, German Democratic Republic, Iceland, Norway, and the Union of Soviet Socialist Republics deposited their instruments of ratification, acceptance or approval, with the Government of Canada. By this Convention ICNAF was replaced by NAFO.

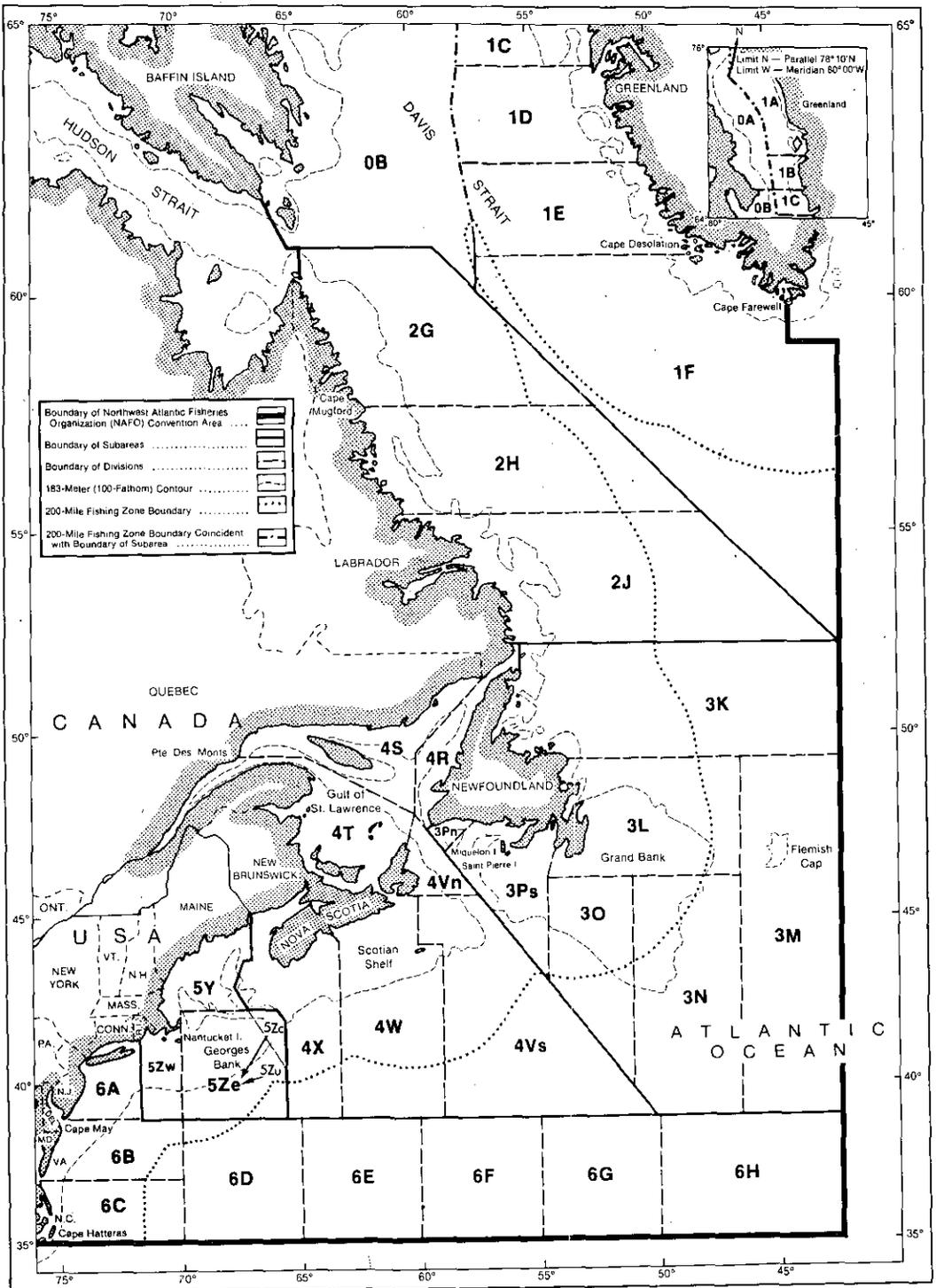
The principal object of NAFO set forth by this Convention is to contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of the Convention Area. To achieve those goals NAFO was structured into four constituent bodies: the General Council, the Scientific Council, the Fisheries Commission, and the Secretariat. The constituent bodies meet at least once annually, while business between meetings is executed through the Secretariat.

During 1991 NAFO held seven major meetings including working groups under the authority of constituent bodies. The 13th Annual Meeting of the Organization in accordance with the provisions of Article IV.4 of the Convention was held at the Holiday Inn, Dartmouth, Nova Scotia, Canada on 9-13 September 1991. The two most pressing problems considered in the course of meetings were in relation to the NAFO Conservation and Enforcement Measures and the fishing activities of non-Contracting Parties in the Regulatory Area. With respect to the Conservation and Enforcement Measures a Working Group on Improvements to Inspection and Control in the Regulatory Area had been established (September 1990) which held two very productive meetings elaborating new amendments to the Conservation and Enforcement Measures. Those amendments including the development of a hail reporting system for vessels fishing in the Regulatory Area and air surveillance were adopted by the Fisheries Commission at the 13th Annual Meeting and became binding measures in accordance with provisions of the NAFO Convention.

Considering the threat to the conservation and optimum utilization of fishery resources and in view of increased fishing activity by non-Contracting Parties vessels in the Regulatory Area, the General Council established a Standing Committee on Fishing Activities of non-Contracting Parties in the Regulatory Area (STACFAC) at its 12th Annual Meeting in September 1990. The Committee held two meetings during 1991 to resolve several important issues which would facilitate the alleviation of this problem. Based on the provisions of the NAFO Convention (Article XIX) and the United Nations Convention on the Law of the Sea, the General Council adopted the Resolution on "Non-NAFO Fishing Activities" that calls to "all members of the International Community whose nationals carry out fishing activities in the NAFO Regulatory Area to ensure that such activities do not have an adverse impact on the stocks or NAFO's ability to ensure conservation".

The NAFO Scientific Program, which is now in its 13th year (plus 30 years of ICNAF), continues to direct its effort to improvements in the standard of the stock assessments and the quality of advice offered to the Fisheries Commission and Coastal States. The more sophisticated analytical methods now being used enable the results of analyses for 19 stocks in the Convention Area to be assessed more objectively.

The Convention Area to which the Convention on Future Multilateral Cooperation in the Northwest Atlantic applies



**Structure of the Northwest Atlantic Fisheries Organization (NAFO) in 1991
(as at 13th Annual Meeting, September 1991)**

Contracting Parties

Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Iceland, Japan, Norway, Poland, Romania, and the Union of Soviet Socialist Republics (USSR).

President

K. Hoydal (Denmark in respect of the Faroe Islands and Greenland)

Constituent Bodies

General Council	Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), EEC, Iceland, Japan, Norway, Poland, Romania and the USSR.	<i>Chairman</i> – K. Hoydal (Denmark in respect of (Faroe Islands and Greenland) <i>Vice-Chairman</i> – E. Oltuski (Cuba)
Scientific Council	Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), EEC, Iceland, Japan, Norway, Poland, Romania and the USSR.	<i>Chairman</i> – B. Jones (EEC) <i>Vice-Chairman</i> – V. P. Serebryakov (USSR)
Fisheries Commission	Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), EEC, Japan, Norway Poland and the USSR.	<i>Chairman</i> – J. Zygmanski (Poland) <i>Vice-Chairman</i> – A. Etchegary (Canada)

Standing Committees

General Council	Standing Committee on Finance and Administration Standing Committee on Fishing Activities of non-Contracting Parties in the Regulatory Area	<i>Chairperson</i> – D. Gill (Canada) <i>Chairman</i> – C. C. Southgate (EEC)
Scientific Council	Standing Committee on Fishery Science Standing Committee on Research Coordination Standing Committee on Publications	<i>Chairman</i> – D. B. Atkinson (Canada) <i>Chairman</i> – W. B. Brodie (Canada) <i>Chairman</i> – V. P. Serebryakov (USSR)
	Executive Committee	<i>Chairman</i> – B. W. Jones (EEC)

Fisheries Commission Standing Committee on International
Control

Chairman – O. Muniz
(Cuba)

Secretariat

Executive Secretary	L. I. Chepel
Assistant Executive Secretary	T. Amaratunga
Administrative Assistant	W. H. Champion
Senior Secretary	B. J. Cruikshank
Finance and Publications Clerk-Steno	F. D. Keating
Documents and Mailing Clerk	F. E. Perry
Senior Statistical Clerk	G. M. Moulton
Clerk-Duplicator Operator	R. A. Myers
Clerk-Duplicator Operator	B. T. Crawford
Clerk-Typist	D. C. A. Auby
Statistical Clerk	B. L. Marshall
Statistical Clerk	C. L. Kerr

Headquarters Location

192 Wyse Road, Dartmouth, Nova Scotia, Canada

PART I

(pages 11-55)

Activities of the General Council in 1991

List of Meetings

The following meetings were held under the authority of the General Council in 1991:

- ◇ First Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC); 30-31 January 1991, Holiday Inn, Dartmouth, Nova Scotia, Canada.
- ◇ Second Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC); 3-4 June 1991, NAFO Headquarters, Dartmouth, Nova Scotia, Canada.
- ◇ The General Council and its subsidiary bodies (STACFAD and STACFAC) Meetings at the Annual Meeting; 9-13 September, Holiday Inn, Dartmouth, Nova Scotia, Canada.

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First Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

The Standing Committee on Fishing Activities of non-Contracting Parties in the Regulatory Area (STACFAC) was established by the General Council at the 12th Annual Meeting in September 1990 (GC Doc. 90/9 -- Annex 1).

The first meeting of STACFAC was held on 30-31 January 1991 at the Holiday Inn, Dartmouth, Nova Scotia, Canada. Full Proceedings of this Meeting are presented in GC Doc. 91/1. The following Contracting Parties were represented: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Poland, and the Union of Soviet Socialist Republics (USSR) (Annex 2).

C. C. Southgate (EEC) was nominated Chairman and Garcia Moreno (Cuba) was nominated Vice-Chairman of the Committee. R. J. Prier (Canada) was appointed Rapporteur.

The Agenda reflected the Terms of Reference for the Committee and was adopted as presented (Annex 3).

Review and Elaboration of Rules of Procedure

The basic provisions of the Terms of Reference for the Committee were adopted as the Rules of Procedure in accordance with the Rules of Procedure for the General Council, Rule 5. These Rules were subject to incorporation in the Rules of Procedure for the General Council under its Rule 5.

Review of Available Information on Activities of Non-Contracting Parties Vessels in the NAFO Regulatory Area

The representatives of Canada, EEC and the USSR submitted reports on non-Contracting Parties fishing activities in the Regulatory Area in 1990. Those documents are appended to the Proceedings of the Meeting (GC Doc. 91/1). The delegations reviewed the documents and highlighted the following points: the data of fishing indicated an increase in Korean and Panamanian activity in the Regulatory Area; the non-Contracting Parties effort has been increasing at a steady pace; Korean vessels concentrated on redfish, Panamanian vessels on cod and USA vessels on flounder. The Canadian representative informed on increased air surveillance by Canada in the Regulatory Area from 1989 to 1990.

Review of Available Information on Landings and Transshipments of Fish Caught in the Regulatory Area

The delegations exchanged their views on this problem. The Canadian representative informed non-Contracting Parties were not authorized to use Canadian ports for transshipments, and that Canada would be interested in what (if any) duties were levied against the import of fish from non-Contracting Parties fishing in the Regulatory Area. The Japanese representative reported on transshipment of approximately 1 000 tons of American plaice to Japan, however, such transshipment was outside the authority of Japanese Deep Sea Trawler Association, which refused such a request by Korean companies. The EEC representative informed on attempts by EEC to determine import of fish from the Regulatory Area and resolve on this issue without resorting to increased levies, bearing in mind the development of the framework to have non-Contracting Parties provide their export information to NAFO.

Examination and Assessment of All Options Open to NAFO Contracting Parties

The Committee considered and agreed with some changes on the Canadian draft text of the Aide Memoire (for joint diplomatic demarches) which should be forwarded to all non-Contracting Parties fishing in the Regulatory Area. The text would be presented to all Contracting Parties for their approval by a mail vote. The final decision on the Aide Memoire (for joint diplomatic demarches) delivery to non-Contracting Parties would be taken during the next meeting of STACFAC.

The two draft texts – “Certificate of Harvest Origin” and “Trade Related Measures Concerning Fish Harvested Inconsistent with NAFO Conservation Measures” – presented by Canada were reviewed by the Committee. Concerns were raised in relation to trade responsibilities and GATT, and the delegates requested more time for reflection on the elements of legal and practical implications of any such measures being taken. The decision was to return to this subject at the next meeting.

Elaboration and Formulation of Recommended Measures to Resolve the Problem

The Committee recommended the following: to finalize the Aide Memoire (for joint diplomatic demarches) and to seek a mandate (from the General Council) to deliver the note to non-Contracting Parties at the very earliest opportunity; to consider constructively the ideas contained in the Canadian proposals for the “Certificate of Harvest Origin” and the “Trade Related Measures Concerning Fish Harvested Inconsistent with NAFO Conservation Measures” to call the next STACFAC meeting in advance of the 13th Annual Meeting on 3-4 June in Dartmouth, Nova Scotia, Canada for elaboration of the recommendations and new ideas.

Annex 1. Terms of Reference*

First Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

EEC/CANADIAN PROPOSAL

The Committee will examine, on the basis of the best available information, options to cause non-Contracting Parties to withdraw from fishing activities contrary to NAFO Conservation Measures in the Regulatory Area. The Committee will make recommendations to that effect to the General Council.

In particular, the Committee will

- ◇ obtain and compile all available information on the fishing activities of non-Contracting Parties in the Regulatory Area, including details on the type, flag and name of vessels and reported or estimated catches by species and area;
- ◇ obtain and compile all available information on landings, and transshipments of fish caught in the Regulatory Area by non-Contracting Parties, including details on the name and flag of the vessels; the quantities by species landed, transshipped; and the countries and ports through which the product was shipped;
- ◇ examine and assess all such options open to NAFO Contracting Parties including measures to control imports of fish caught by non-Contracting Parties vessels in the Regulatory Area and to prevent the reflagging of fishing vessels to fish under the flags of non-Contracting Parties;
- ◇ recommend to the General Council measures to resolve the problem.

The Committee will include one representative from each Contracting Party that wishes to participate. The chairperson will be elected for a term of two (2) years. The initial chairperson will be _____.

The Committee will report to the General Council once a year, at the Annual Meeting of NAFO, and as otherwise requested by the General Council.

* GC Doc. 90/9

Annex 2. List of Participants

First Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC) 30-31 January 1991, Dartmouth, N.S., Canada

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- T. Amaratunga, Assistant Executive Secretary
- W. H. Champion, Administrative Assistant
- G. Moulton, Senior Statistical Clerk
- B. Cruikshank, Senior Secretary
- F. Perry, Typist

Annex 3. Agenda

First Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

Holiday Inn, Dartmouth, Nova Scotia, Canada
30-31 January 1991

1. Opening by the Executive Secretary, L. I. Chepel
2. Election of the Chairman and the Vice-Chairman
3. Appointment of Rapporteur
4. Adoption of Agenda
5. Review and Elaboration of Rules of Procedure
6. Review of all available information on activities of Non-Members vessels in the NAFO Regulatory Area (national reports)
7. Review of all available information on landings and transshipments of fish caught in the Regulatory Area by non-Contracting Parties (national reports)
8. Examination and assessment of all options open to NAFO Contracting Parties
9. Elaboration and formulation of recommended measures to resolve the problem
10. Time and Place of Next Meeting
11. Other Matters
12. Adjournment

Second Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

The second meeting of STACFAC was held at the NAFO Headquarters in Dartmouth, Nova Scotia, Canada on 3-4 June 1991 under the chairmanship of C. C. Southgate (EEC). Full Proceedings of this Meeting are presented in GC Doc. 91/2.

The following Contracting Parties were present: Canada, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Poland, and the Union of Soviet Socialist Republics (USSR) (Annex 1).

R. J. Prier was appointed as Rapporteur. The Agenda was adopted as presented (Annex 2).

Amendment of the Rules of Procedure

The Rules of Procedure for the Committee were amended to reflect the Rules of Procedure for the General Council and adopted by the Committee. The Rules would be presented to the General Council during the 13th Annual Meeting in September 1991, for approval and incorporation in the basic text of the Rules for the General Council.

Review of Supplementary Information on Activities of Non-Contracting Parties Vessels in the Regulatory Area

One paper was tabled for this purpose by the Canadian delegation, which informed that after the last meeting Canada contacted Panama, the Republic of Korea and the USA expressing its concerns for non-Contracting Parties activities. The Japanese representative informed on their contact with Korea stressing the need for Korea to comply with the conservation measures of NAFO. As a response, the Korean side expressed its willingness and reduced their effort in the Regulatory Area from 7 to 5 vessels. The EEC representative expanded on the EEC's effort with non-Contracting Parties (the Cayman Islands and Malta) to reduce these countries activity in the Regulatory Area. The summaries of all correspondence between the NAFO Secretariat and the non-Contracting Parties fishing in the Regulatory Area were presented to the Meeting (in accordance with the Resolution of the General Council, GC Doc. 90/8). As it states, only two countries, USA and Korea, had presented their fishery statistics for the Regulatory Area (in form STATLANT 21A and 21B).

Review of Supplementary Information on Landings and Transshipments of Fish Caught in the Regulatory Area by Non-Contracting Parties

Brief comments were expressed as follows: The Canadian representative noted the increased transshipments in the area of St. Pierre-Miquelon (by Korean vessels), however, concrete statistics were unavailable; the EEC representative informed on its activity to obtain the statistics of non-members' activity and proposed to introduce a landing declaration for this purpose. As for the activities in the St. Pierre-Miquelon area, there was no way to provide any confirmation to Canada's report because the area did not come under the EEC jurisdiction; the Japanese representative pointed out that the Japan Deep Sea Trawlers Association restricted themselves from purchasing fish caught by non-member countries in the Regulatory Area.

Approval of the Text of the Aide Memoire (for Joint Diplomatic Demarches) and Decision on the Delivery of the Aide Memoire to Non-Contracting Parties

The text of the Aide Memoire was agreed as modified by the Contracting Parties. In particular, a new paragraph was added (EEC proposal) requesting non-Contracting Parties to provide statistics of fish caught in the Regulatory Area using the format established by FAO and used by NAFO. The Committee reached a consensus on the subject of the Aide Memoire delivery as follows:

The Executive Secretary shall send the Aide Memoire to all Contracting Parties to confirm approval of the minor changes to the text relevant to the provisions of the Law of the Sea Convention (UNCLOS III), and to request Contracting Parties to volunteer to deliver the notes to specific non-Contracting Parties. The Aide Memoire shall be signed by the Chairman of the General Council, the President of NAFO, and dispatched to non-Contracting Parties as soon as possible before the 13th NAFO Annual Meeting.

Discussion of the Certificate of Harvest Origin for Statistical Purposes

The Committee considered the following: draft text of the Certificate of Harvest Origin presented by Canada, proposals by the EEC for the Landing Declaration and Japan for the Collected information. The delegations agreed in principle towards the idea of certification and statistical information of harvested fish in the Regulatory Area. However, the draft text of the technical paper as a compromise of different proposals was set aside in view of disagreement of some delegations on technical and legal issues in relation to the existing import system. The emphasis was put on restrictions of any such reporting system to the Regulatory Area and non-Contracting Parties, and on least possible burden to the administrative system of the Contracting Parties. The agreement was reached that this issue will be considered at the 13th Annual Meeting in September 1991.

Trade Related Measures Concerning Fish Harvested Inconsistent with NAFO Conservation Measure

A brief discussion was held around the Canadian paper presented at the First STACFAC meeting (GC Doc. 91/1, Appendix VIII). All delegations present agreed on postponement of the discussion on this issue as several delegations expressed their disagreement.

Consideration of the Report, Including Concrete Recommendations to the General Council

On the basis of the EEC presentation the delegations held extensive discussions and agreed that at this stage STACFAC could not report back to the General Council specific recommendations to resolve the problem of fishing of non-Contracting Parties. The time was needed to obtain the results of unilateral actions and joint diplomatic demarches. The recommendations of STACFAC to the General Council would be elaborated at the 13th Annual Meeting in September 1991.

The next STACFAC meeting will be held on 9-13 September 1991 during the NAFO Annual Meeting at the Holiday Inn, Dartmouth, Nova Scotia, Canada.

Annex 1. List of Participants

Second Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC) 3-4 June 1991, Dartmouth, Nova Scotia, Canada

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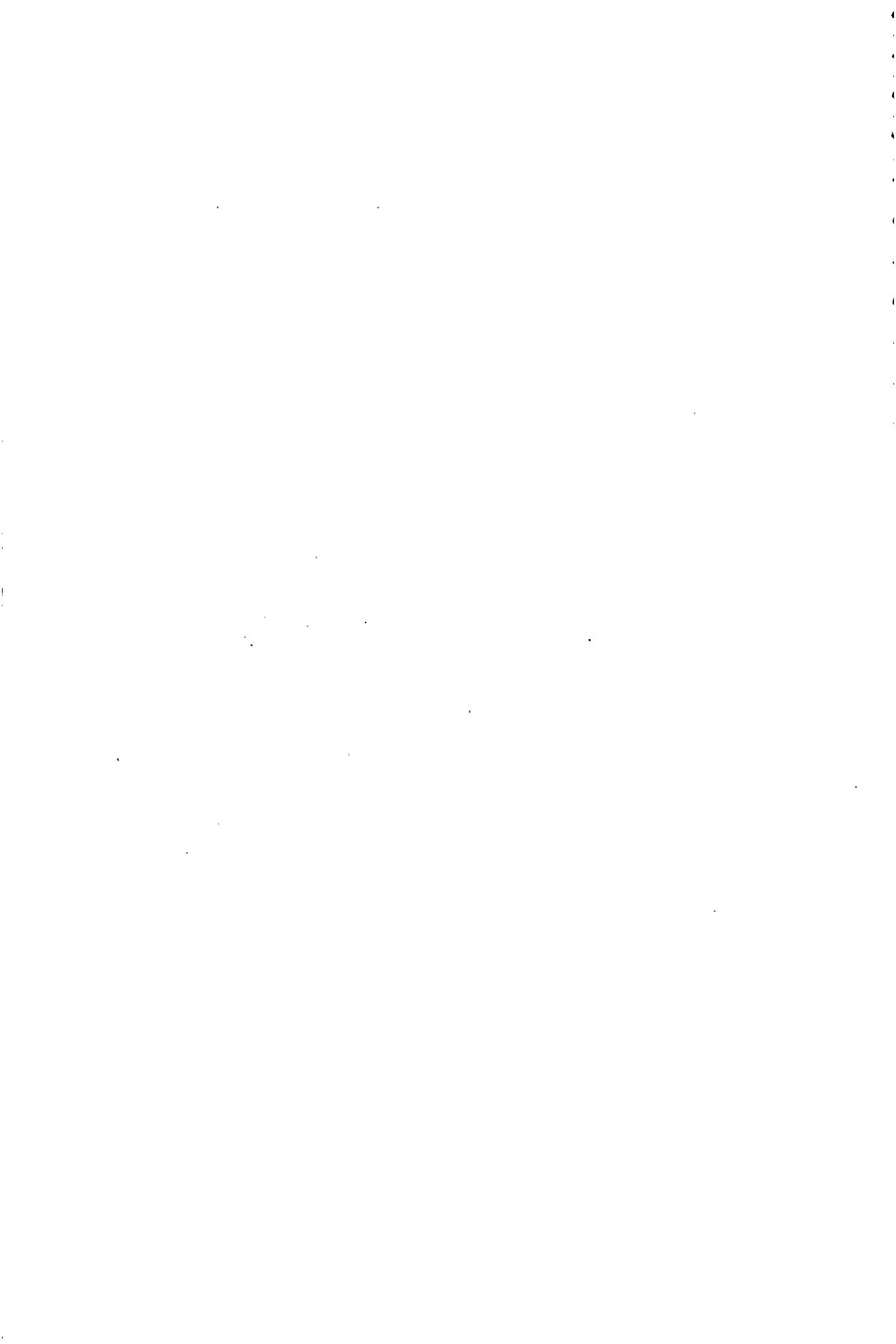
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Annex 2. Agenda

Second Meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

NAFO Headquarters, Dartmouth, Nova Scotia, Canada
3-4 June 1991

1. Opening by Chairman, C. C. Southgate (EEC)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Amendment of the Rules of Procedure
5. Review of supplementary information on activities of non-Contracting Parties vessels in the Regulatory Area (national reports)
6. Review of supplementary information on landings and transshipments of fish caught in the Regulatory Area by non-Contracting Parties (national reports)
7. Approval of the text of the AIDE MEMOIRE (for joint diplomatic demarches): decision on the delivery of the AIDE MEMOIRE to the non-Contracting Parties
8. Discussion of the Certificate of Harvest Origin (submitted by Canada, Appendix VII, Report of First Meeting of STACFAC)
9. Discussion of the Trade Related Measures Concerning Fish Harvested Inconsistent with NAFO Conservation Measures (submitted by Canada, Appendix VIII, Report of First Meeting of STACFAC)
10. Elaboration of the Report, including concrete recommendations, to the General Council
11. Time and Place of Next Meeting
12. Other Matters
13. Adjournment



General Council Meeting 13th Annual Meeting, 9-13 September 1991

The General Council Meeting, which includes the meetings of its subsidiary bodies – Standing Committee on Finance and Administration (STACFAD) and Standing Committee on Fishing Activities of non-Contracting Parties in the Regulatory Area (STACFAC) – was held during the Annual NAFO Meeting on 9-13 September 1991 at the Holiday Inn, Dartmouth, Nova Scotia, Canada. Full Proceedings of this Meeting are presented in GC Doc. 91/7.

The meetings of subsidiary bodies of the General Council were held daily during 9-13 September. The General Council held two plenary sessions – an opening session on 10 September and a closing session on 13 September. During the interim period there were several brief working meetings of the heads of delegations and the members of the General Council. The following is a summary of the proceedings.

Opening of the Meeting

The meeting was opened by the Chairman of the General Council, K. Hoydal (Denmark in respect of the Faroe Islands and Greenland) on 10 September 1991 at the Holiday Inn, Dartmouth, Nova Scotia, Canada. The members of the General Council present were: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Norway, Poland and the Union of Soviet Socialist Republics (USSR) (Annex 1). The following Contracting Parties were absent: Bulgaria, Iceland and Romania. Observers from the United States of America (USA) were present.

The Chairman presented his opening address (Annex 2) to the Meeting expressing his optimism on a very significant increase in the degree of consensus among NAFO members on a number of important issues. The representative of Canada informed that the Canadian Delegation would like to make a later statement under item 13 of the Agenda "Fishing Activities in the Regulatory Area adverse to the objectives of the Convention (Article XIX of the Convention)" (Annex 4).

The Executive Secretary was designated as Rapporteur to the Meeting. The Agenda was adopted as presented to the Meeting in the form of a Provisional Agenda. (Annex 3).

For the Greenpeace application to the NAFO membership, the Executive Secretary was instructed to convey the General Council's negative decision along the same line as of last year.

Supervision and Coordination of the Organizational, Administrative and Other Internal Affairs (Agenda items 6 to 11)

The General Council adopted the Proceedings of the 12th Annual Meeting (GC Doc. 90/10) and the Rules of Procedure for STACFAC to incorporate in the basic text of the General Council. The provision of "seconding" of motions for the Rules of Procedure was postponed for further research by the Executive Secretary and its presentation to the 14th Annual Meeting in September 1992.

The following items of the Agenda: Review of Membership, NAFO Headquarters accommodations and Administrative Report were considered by STACFAD. The interim Chairman of STACFAD, H. Koster (EEC) presented the following report which was adopted by the General

Council: The former member of the General Council and the Fisheries Commission, German Democratic Republic (GDR) has ceased to be a Contracting Party to the Convention, as a result of the accession of the (ex) GDR to the Federal Republic of Germany. The EEC has succeeded to the rights and obligations of the former GDR under the Convention and within NAFO (documents to the Meeting: GF/90-370 and GF/91-170).

One Contracting Party, Romania, is on record of contributions to NAFO as "in arrears" (Financial Regulations Rule 4.7) for more than two (2) years, and in accordance with Article XVI.9 of the Convention this Contracting Party "shall not enjoy any right of casting votes and presenting objections under the Convention" at the present time.

The total number of members of the General Council at this meeting was 11 and of the Fisheries Commission was 9.

For the accommodations of NAFO Headquarters, the Executive Secretary was instructed to provide STACFAD with actual costs of meetings held outside of NAFO for the estimation of the most cost-effective option.

The Administrative Report was approved by STACFAD with the recommendation that appropriate actions be taken to ensure the reports of catch statistics from Contracting Parties be presented to the NAFO Secretariat on a timely basis for calculation of annual billing.

Coordination of External Relations (Agenda item 12)

The General Council endorsed the United Nations Resolution 45/197 on large-scale pelagic driftnet fishing and instructed the Executive Secretary to inform the United Nations accordingly asking for clarification on the definition of a "large-scale pelagic driftnet fishery".

Fishing Activities in the Regulatory Area Adverse to the Objectives of the Convention (Article XIX of the Convention) (Agenda items 13 to 15)

The provisions of Article XIX of the Convention provide: "The Contracting Parties agree to invite the attention of any State not a Party to this Convention to any matter relating to the fishing activities in the Regulatory Area of the nationals of vessels of that State which appear to affect adversely the attainment of the objectives of this Convention. The Contracting Parties further agree to confer when appropriate upon the steps to be taken towards obviating such adverse effects."

The reports of two STACFAC meetings held in 1991 (GC Doc. 91/1 and GC Doc. 91/2) were adopted by the General Council.

The Chairman of STACFAC, C. C. Southgate (EEC), presented the Committee's decision to continue its work as follows:

To assess the final results of the Aide-Memoires (for joint diplomatic demarches) dispatches to the non-Contracting Parties; to determine the destination of fish products of non-Contracting Parties from the Regulatory Area; to develop and agree on ideas for a system to collect data on landings of catches which would be limited to non-Contracting Parties and the Regulatory Area only. The STACFAC report and its recommendations (Annex 5) were adopted by the General Council.

Finance (Agenda items 16 to 20)

All questions related to the finances of NAFO were considered by STACFAD. The Chairman of STACFAD, presented the results of Committee meetings and its report including new Staff Rules (Annex 6) which were adopted by the General Council.

It was noted that the approved budget does not contain the cost of financial implications of implementation of new measures for inspection and enforcement in the Regulatory Area. Such costs could be in a range of \$65,000-\$70,000 (preliminary estimates) and subject to further findings through a consultant(s) and presentation to the Contracting Parties.

The representative of Canada, D. Gill, was re-elected by STACFAD as the Chairperson of STACFAD for a second term (1992-93) and H. Koster (EEC) was elected as the Vice-Chairman.

Closing the Meeting (Agenda items 21 to 24)

The representative of Canada presented a draft Resolution "To Establish a new Scheme of Effective Joint International Enforcement" which calls for a special NAFO meeting to be held before the end of June 1992. All Contracting Parties present expressed their understanding of the Canadian concern for efficiency of the joint international inspection and control in the Regulatory Area as this is one of the major goals for the Contracting Parties. The General Council decided that the preparatory work requires more time and agreed that the Canadian delegation will conduct further consultations with Contracting Parties to discuss the ideas and define the time for the Meeting.

In accordance with the provisions of Article IV.2 of the Convention, the representative of Japan, K. Yonezawa, was elected as the Chairman of the General Council, the President of the Organization, to serve for a term of 2 years (1992-1993) and the representative of Norway, P. Gullestad, was elected as the Vice-Chairman. The summary of the decisions and results of the 13th Annual Meeting were presented in the Press Release (Annex 7) agreed by the General Council.

The General Council agreed to hold the 14th Annual Meeting in Dartmouth, Nova Scotia, Canada on 14-18 September 1992.

Annex 1. List of Participants

**General Council, 13th Annual Meeting, Dartmouth, Nova Scotia, Canada
9-13 September 1991**

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Annex 2. Address by the Chairman, K. Hoydal

It is an honour for me to call the General Council at the 13th Annual Meeting to order and welcome all delegates from the Contracting Parties.

It is fair to say that the 12th Annual Meeting ended on a much happier note than the previous meetings. There was a very significant increase in the degree of consensus on a number of issues and the scope serious international cooperation was widened considerably. Particularly in agreement on quotas, improvement of inspection schemes and routines and handling of non-Member activity.

It is my hope that the tone of the 12th Annual Meeting will prevail and even be improved.

Having said that there was an improvement last year, I have to stress that we still are facing very difficult problems and although we hopefully have entered a path of cooperation, which ultimately can solve those problems, important decisions have to be taken to stabilize the situation in the management of the stocks for which NAFO has responsibility.

It could be said that the question NAFO has to address is: How can NAFO prove that the multilateral cooperation beyond the 200-mile limit can manage as efficiently as fisheries administrations of the Contracting Parties. We should not aim at anything less than what we demand from the management in our zones.

Annex 3. Agenda

13th Annual Meeting of NAFO
 Holiday Inn, Dartmouth, Nova Scotia, Canada
 9-13 September 1991

GENERAL COUNCIL

Opening Procedures

1. Opening by Chairman, K. Hoydal (Denmark in respect of the Faroes and Greenland)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Admission of Observers
5. Publicity

Supervision and Coordination of the Organizational, Administrative and other Internal Affairs

6. Approval of Proceedings of 12th Annual Meeting, September 1990 (See GC Doc. 90/10, Revised)
7.
 - a) Approval and adoption of amendment to the Rules of Procedure (new Standing Committee-STACFAC; GC Working Paper 91/2)
 - b) Clarification of the Rules of Procedure regarding the "seconding" of all motions (GC Working Paper 91/1)
8. Review of Membership
 - a) General Council (GF/90-370, 91-171)
 - b) Fisheries Commission (GF/90-370, 91-171)
9. NAFO Headquarters accommodations for conducting of NAFO meetings (GC Working Paper 91/3)
10. Administrative Report
11. Election of Officers - Chairman and Vice-Chairman

Coordination of the External Relations

12. Request from the Under-Secretary General of the United Nations on information of large-scale pelagic driftnet fishing - Resolution 44/225 - of the General Assembly of the United Nations (GF/91-167, GF/91-251)

Fishing activities in the Regulatory Area adverse to the objectives of the Convention (Article XIX of the Convention)

13. Approval of Proceedings of First and Second Meetings of STACFAC (GC Doc. 91/1 and 91/2)
14. Practical implementation of the General Council Resolution on Non-NAFO Fishing Activities (GC Doc. 90/8; Reports of STACFAC)
15. Report of STACFAC

Finance

16. Auditor's Report
17. Meeting of the Pension Society
18. Staff Rules (GF/91-163; STACFAD Working Paper 91/1, 91/4)
19. Review of Meeting Dates and Date of Annual Meeting (Note 5)
20. Report of STACFAD

Closing Procedures

21. Time and Place of Next Meeting
22. Other Business
23. Press Statement
24. Adjournment

Annex 4. Statement by the Head of the Canadian Delegation on Effective International Enforcement

Mr Chairman:

I would like to make a brief statement on behalf of the Canadian delegation.

The issue of fishing by non-Contracting Parties inside the Regulatory Area is of great concern to Canada. It is one of the many vital questions NAFO must address with some degree of urgency.

The fact that we now have a Standing Committee on eliminating non-Member fishing activity, a new working group on improving inspection and control in the Regulatory Area may appear to indicate that NAFO is a likely organization. But, Mr Chairman, as we sit here, the fishstocks for which NAFO is responsible are declining at an alarming rate. We are killing more fish than we should. The Scientific Council is telling us that too much of the catches are unrecorded. Too many fish are harvested too young. We know that if our fish die, our fishing communities will die with them. We know that if our fish die, NAFO will become irrelevant. We know that we must act to stop this trend and to reverse it.

Using these estimates, our scientists have estimated fishing mortalities. In most cases, they have advised precautionary TACs at the same level as those of last year. Uncertainty prevails. NAFO is in a holding pattern but in the meantime, the stocks are going down.

Mr Chairman, the Canadian delegation is deeply concerned about the state of the stocks in the Regulatory Area and about the inability of NAFO to implement effectively management measures necessary to the rebuilding and protection of those stocks. We propose to make a further statement on that matter at the Fisheries Commission this afternoon.

Thank you, Mr Chairman.

Annex 5. Recommendation to the General Council

13th Annual NAFO Meeting
9–13 September 1991

THE STANDING COMMITTEE ON FISHING ACTIVITIES OF NON-CONTRACTING PARTIES IN THE NAFO REGULATORY AREA – STACFAC

Recalling the Resolution on non-NAFO Fishing Activities adopted by the General Council at the 12th Annual Meeting of the Northwest Atlantic Fisheries Organization, resolving i.a. that

- ◊ in full respect of the international obligations of Contracting Parties, further measures should be developed for consideration by the General Council at its 1991 annual meeting;

Recalling the Terms of Reference of the Standing Committee (STACFAC), established by the General Council “to examine options to cause non-Contracting Parties to withdraw from fishing activities contrary to NAFO Conservation Measures”;

Recalling the relevant provisions of the United Nations Convention on the Law of the Sea (UNCLOS) on the obligations of states with respect to conservation of the living resources of the high seas;

Recalling the provisions of the General Agreement on Tariffs and Trade (GATT), in particular the principles of non-discrimination, proportionality and transparency;

Considering that the Northwest Atlantic Fisheries Organization is the competent regional fisheries organization for the conservation and rational management of the fish resources in the NAFO Regulatory Area;

Expressing concern at the serious threat to conservation and rational stock management posed by increasing fishing activities of vessels flying the flag of countries that are not Contracting Parties of NAFO and to whom quotas in the NAFO Regulatory Area have not been assigned, and convinced that such non-Contracting Parties should cooperate in accordance with the principles contained in UNCLOS;

Bearing in mind the adverse effect of high levels of unreported catches by non-Contracting Parties for the assessment of stocks and the provision of management advice;

Noting with satisfaction the individual and joint diplomatic demarches to the aforementioned non-Contracting Parties engaged in fishing activities in the NAFO Regulatory Area undertaken by NAFO Contracting Parties and bearing in mind the positive responses received to date;

Taking into account the views expressed in STACFAC discussions;

Recommends to the General Council at its 13th Annual Meeting that:

1. Contracting Parties follow-up on the successive diplomatic initiatives undertaken individually and jointly with non-Contracting Parties seeking the necessary measures to prevent fishing contrary to NAFO Conservation Measures and shall report the results to STACFAC for consideration of possible further action;

2. The Executive Secretary shall continue his efforts to draw to the attention of non-Contracting Parties the negative impact of the fishing activities of their vessels in the Regulatory Area and the importance of providing NAFO with complete and accurate statistical catch reports;
3. Contracting Parties seek to collect data on fishing activities of vessels flying the flags of non-Contracting Parties in the NAFO Regulatory Area including catches and landings; Contracting Parties provide regular reports of these activities to the NAFO Executive Secretary; and the Executive Secretary shall distribute these reports to all Contracting Parties.
4. Contracting Parties provide the NAFO Executive Secretary on annual basis as of first January 1992 statistics available to them on their imports of groundfish species regulated by NAFO from non-Contracting Parties whose vessels fish in the NAFO Regulatory Area;
5. STACFAC shall examine where possible methods of improving the reporting of catches and landings from the NAFO Regulatory Area by non-Contracting Parties.
6. Contracting Parties shall investigate options open to them, in accordance with their legislation, to dissuade their nationals from engaging in fishing activities, in contravention of NAFO conservation decisions, in the NAFO Regulatory Area under non-Contracting Party flags and to discourage such activities where they are presently taking place.
7. STACFAC shall continue examination of a Landing Declaration system to collect data on landings of catches by non-Contracting Party vessels in the NAFO Regulatory Area and provide a report on possible implementation to the General Council in 1992.
8. STACFAC shall submit a comprehensive report to the General Council at the 14th Annual Meeting on the above provisions and on possible additional measures consistent with STACFAC's Terms of Reference for consideration.

Annex 6. NAFO Staff Rules

(Adopted by the General Council at the
13th Annual Meeting, 9-13 September 1991)

SECTION 1. SCOPE AND GENERAL PROVISIONS

Rule 1.1

These Staff Rules establish the fundamental principles of employment, regulate the working relationships and set out the rights and responsibilities of employees in the service of the Northwest Atlantic Fisheries Organization (hereinafter referred to as the "Organization").

Rule 1.2

The amount of leave with pay, sick leave credits and severance benefits credited to members of the Secretariat, at the time when these Staff Rules become effective, or at the time when those members become subject to them, shall be retained intact.

Rule 1.3

In these Rules:

- 1) "Staff members" are the permanent members of the staff of the Secretariat.
- 2) "Members of the Secretariat" are the Executive Secretary and the staff members.
- 3) "Employees" are all personnel hired or contracted by the Organization for service in the Secretariat.
- 4) "General Council", "Secretariat" and "Executive Secretary" are the entities defined in the text of the International Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, done at Ottawa, on 24 October 1978, hereinafter referred to as "the Convention".
- 5) "Regular Pension Scheme" is the pension plan of the International Fisheries Commissions Pension Society established by Canada and the United States for all employees of international fisheries commissions with headquarters in either of those two countries.
- 6) "Social Security Plans" are the life and long-term disability plans of the International Fisheries Commissions Pension Society, defined above.
- 7) "Separation from service" is the ending of employment for any reason whatsoever, as in lay-off, resignation, retirement, termination of appointment by either side or death

SECTION 2. DUTIES, OBLIGATIONS AND PRIVILEGES

Rule 2.1

Members of the Secretariat are international civil servants. Upon assuming their responsibilities they shall discharge their duties faithfully and conduct themselves in the best interests of the Organization.

Rule 2.2

Employees are not expected to renounce their national feelings nor political nor religious convictions while working for the Secretariat. They are however expected to conduct themselves in a manner consistent with the international nature of the Organization. They must always exercise loyalty, discretion and tact in the performance of their duties and shall avoid actions, statements and public activities which might be detrimental to the Organization and its aims.

Rule 2.3

All employees are responsible to the Executive Secretary in the fulfilment of their duties, and shall not accept directions or instructions from any authority other than the Executive Secretary. In the case of the Executive Secretary, the Chairman of the General Council shall give such directions to the Executive Secretary as will ensure that the business of the Organization is carried out efficiently and in accordance with its decisions.

Rule 2.4

Authorization for the release of information for official purposes shall lie with the Organization or the Executive Secretary, as the Convention may require. Otherwise employees should abstain from releasing information they possess by reason of their position.

Rule 2.5

Employees shall not be restricted in engaging in other employment outside the hours they are required to work for NAFO as long as this work does not represent a conflict of interest with their position in the Organization.

Rule 2.6

No member of the Secretariat may be actively associated in the management of a business, industry or other enterprise, or have a financial interest therein if, as a result of the official position held in the Secretariat, that person may benefit from such association or interest. Ownership of non-controlling stock in a company shall not be considered to constitute a financial interest in the meaning of this Rule.

Rule 2.7

All members of the Secretariat shall reside in the area where the headquarters of the Organization is located.

Rule 2.8

Members of the Secretariat shall enjoy the privileges and immunities to which they are deemed to be entitled as a consequence of the NAFO Convention and pursuant to the Northwest Atlantic Fisheries Organization Privileges and Immunities Order (Order-in-Council P.C. 1980-132, 11 January 1980), or under any agreement signed between the Organization and the Contracting Party concerned.

Rule 2.9

The Executive Secretary is empowered to delegate to any staff member those duties considered necessary to achieve the most efficient operation of the Secretariat.

SECTION 3. CLASSIFICATION OF MEMBERS OF THE SECRETARIAT

Rule 3.1

Members of the Secretariat shall be classified in either of two (2) categories:

a) Professional Category

Positions of high responsibility of a managerial, or scientific nature. These posts will be filled by appropriately qualified professionals, preferably with university qualifications or the equivalent. Staff members in this category will be recruited internationally among citizens of Contracting Parties of the Organization.

b) General Services Category

Positions of auxiliary administrative and technical nature. Clerical, secretarial and other office personnel. Such staff members shall be recruited from Canada.

SECTION 4. RECRUITMENT AND APPOINTMENT

Rule 4.1

In accordance with Article XV.2 of the Convention, the General Council shall appoint the Executive Secretary and shall establish tenure, remuneration and other conditions and entitlements as appropriate, within the principles of these Rules.

Rule 4.2

In accordance with Article XV.3 of the Convention, the Executive Secretary shall appoint all staff members.

Rule 4.3

Staff members are generally appointed under a probation period of six (6) months. During the probation period either party may terminate the appointment upon written notice of one (1) month, or a shorter period if mutually agreed.

Rule 4.4

Upon appointment at the start of the probation period, each staff member shall receive a letter of appointment stating:

- a) nature of the appointment, specifying the duties of the position and its title;
- b) date of appointment, coinciding with the beginning of the probation period;
- c) period of the appointment, either on a fixed term or a continuing basis, from the beginning of the probation period;

- d) category, level, initial salary, scale of increments and any allowances;
- e) any special terms and conditions which may be applicable; and
- f) that the appointment is subject to the Staff Rules.

Upon receipt of the letter of appointment and on or before the end of the period of probation, staff members shall indicate in writing that they are familiar with the terms of the appointment as specified and with the Staff Rules, and that all conditions are acceptable.

Rule 4.5

As a condition of the appointment, staff members must be willing to submit to a medical examination and present a resulting certificate stating that they have no medical conditions which might prevent them from performing their duties, or which might endanger the health of others; they may be required to undergo further medical examination from time-to-time at the expense of the Organization.

SECTION 5. HOURS OF WORK AND PAY PERIODS

Rule 5.1

The normal working week shall consist of thirty seven and one-half (37-1/2) hours, Monday through Friday.

The Executive Secretary shall establish the detailed working hours, and may alter them for the benefit of the Secretariat, as circumstances may require.

Rule 5.2

The Organization will pay the members of the Secretariat twice a month, the reference days as pay days being the fifteenth (15th) day and the last day of each month. Members of the Secretariat will be given their pay cheques two (2) banking days before the pay days.

SECTION 6. SALARIES, ALLOWANCES AND OTHER REMUNERATION

Rule 6.1

The scale of salaries, allowances and any other relevant conditions of employment for members of the Secretariat shall be established and will reflect the salary levels, allowances and conditions pertaining to similarly employed persons occupying similar positions in the public sector of the host country, subject to the NAFO Financial Regulations. The Executive Secretary shall be responsible for the determination of the appropriate public sector analogues in order to establish this parity, which will be submitted to approval of the Organization at its next annual meeting.

Rule 6.2

Salaries, allowances and other remuneration shall be paid in the national currency of the host country.

Rule 6.3

The starting salary shall be that established according to the principles of Rule 6.1, commencing at Step 1. The members of the Secretariat will receive a step increase for each year of service based

on the principle of the public sector of the host country, as long as the staff members performance has been considered satisfactory by the Executive Secretary, subject to the approval of the Organization at its next annual meeting.

Rule 6.4

Any change in job classification for staff members may be provisionally authorized by the Executive Secretary through consultation with STACFAD, subject to ratification by the Organization at its next annual meeting.

Rule 6.5

Members of the Secretariat shall not qualify for overtime pay. When, at the request of the Executive Secretary, staff members are required to work more than thirty seven and one-half (37-1/2) hours per week, or outside the detailed normal working hours or days, this will be compensated with leave equivalent to the hours of overtime worked. The Executive Secretary will determine the correspondent equivalent leave based on the principles for payment of overtime by the public sector of the host country.

Rule 6.6

The Organization will pay for justified hospitality and representation expenses incurred by the Executive Secretary, after promptly documented claims for the corresponding expenses have been submitted. Exceptionally the Executive Secretary might authorize the Assistant Executive Secretary or any other member of the staff to participate in this type of activity and the corresponding expenses will be limited to the amounts and circumstances the Executive Secretary will define.

SECTION 7. LEAVE AND HOLIDAYS

A. Annual Leave

Rule 7.1

Members of the Secretariat shall be entitled to annual leave with pay at the following rates:

- a) one and one-quarter (1-1/4) days for each calendar month until the month in which the anniversary of the employee's eighth (8th) year of continuous employment occurs;
- b) one and two-thirds (1-2/3) days for each calendar month commencing with the month in which the employee's eighth (8th) anniversary of continuous employment occurs;
- c) two and one-twelfth (2-1/12) days for each calendar month commencing with the month in which the employee's nineteenth (19th) anniversary of continuous employment occurs;
- d) two and one-half (2-1/2) days for each calendar month, commencing with the month in which the employee's thirtieth (30th) anniversary of continuous employment occurs;
- e) For the purposes of leave entitlements in accordance with these staff rules, an employee of the Professional Category (Rule 3.1(a)) may receive credit for continuous years of service prior to joining NAFO in federal or provincial governments (and international equivalencies), and

years of service in other international organizations as agreed by a signed contract between the employee and NAFO;

- f) the Executive Secretary will determine the acceptability of past years experience of an employee in the General Services Category (Rule 3.1(b)).

Rule 7.2

Annual leave shall be authorized by the Executive Secretary who, insofar as possible, shall bear in mind the personal circumstances, needs and preferences of staff members. Nevertheless the leave period shall not cause disruption of normal Secretariat operations and consequently leave shall be subject to the exigencies of the Organization.

Rule 7.3

Members of the Secretariat are expected to take all their annual leave during the year in which it accrues. When in any year a staff member has not been granted all of their accrued annual leave, a maximum of twenty-five (25) work days of the unused accrued leave may be carried over to the following year.

Rule 7.4

Annual leave in anticipation of future days to be accrued shall be at the discretion of the Executive Secretary.

Rule 7.5

Members of the Secretariat while on probation are not to be granted annual leave, although they shall accrue such a leave from the beginning of their appointment.

B. Official Holidays

Rule 7.6

Members of the Secretariat shall be entitled to the paid holidays traditionally celebrated in the location of the headquarters of the Organization. Such official holidays shall be announced by the Executive Secretary at the beginning of the year. If any of these dates fall on a Saturday or a Sunday, the holiday shall be observed on another day, to be set by the Executive Secretary, subject to service needs and, if possible, staff preference.

C. Sick Leave

Rule 7.7

Members of the Secretariat shall earn sick leave credits at the rate of one and one-half (1-1/2) days for each calendar month during which they worked for at least ten (10) days.

Rule 7.8

No member of the Secretariat shall be granted sick leave for a period of more than three (3) consecutive days, and more than a total of seven (7) working days in any calendar year without

producing a medical certificate. A staff member shall not, whilst on sick leave, leave the area of the Organization without the prior approval of the Executive Secretary.

Rule 7.9

Members of the Secretariat shall be granted sick leave with pay when they are unable to perform their duties because of illness or injury provided that:

- i) they satisfy the Executive Secretary of their condition,
- ii) they have the necessary leave credits.

Rule 7.10

When a staff member has insufficient or no credits to cover the granting of sick leave with pay, sick leave with pay may, at the discretion of the Executive Secretary, be granted for a period of up to fifteen (15) working days, subject to the deduction of such advanced leave from any sick leave credits subsequently earned, and, in the event of termination of employment for reasons other than death or lay-off, subject to the recovery of the advance, from any monies owed the staff member. No deduction and no recovery of the advance are to be effected if the sick leave is considered the result of injury on duty, in which case the advance sick leave credits to a maximum of six (6) months could be provided at the discretion of the Executive Secretary.

Rule 7.11

Accidents at work must be reported immediately to the Executive Secretary.

D. Marriage Leave

Rule 7.12

After the completion of one (1) year continuous employment, and provided that ten (10) days notice is given, any member of the Secretariat has the right to be granted five (5) days leave with pay for the purpose of getting married.

E. Maternity Leave

Rule 7.13

Members of the Secretariat who have completed their probation period before confinement shall be entitled to maternity leave for a period of sixteen (16) weeks. The timing of this leave shall depend on medical advice. During this period she shall continue to receive full pay and corresponding allowances, including accrual of annual leave, provided she continues to remain in the Organization's employment for a period of at least six (6) months after returning to work. Should she fail to return to work for the required six (6) month period, she shall be indebted to the Organization for the amounts received as maternity leave pay and allowances.

F. Other Leave

Rule 7.14

The Executive Secretary is empowered to grant requests by a staff member for leave with pay in cases of bereavement or exceptional family related responsibilities. In the case of death of an

immediate family member the period of leave with pay shall normally be five (5) working days.

Rule 7.15

At the discretion of the Executive Secretary leave may be granted with or without pay for purposes other than those specified in these Rules.

G. Application for Leave

Rule 7.16

As far in advance of the leave period as possible, a form titled Application for Leave is to be completed by each staff member, initialized when approved by the supervisor and the Executive Secretary, and passed to the Administrative Assistant for recording purposes.

H. Irregular Leave or Absence

Rule 7.17

Any leave or absence not acceptable within the terms of these Rules shall be deducted from the annual leave and its payment will be at the discretion of the Executive Secretary.

SECTION 8. SOCIAL SECURITY

Rule 8.1

It shall be a condition of employment that members of the Secretariat join the Regular Pension Scheme and the Social Security Plans set up by the Organization covering life and disability insurances.

Rule 8.2

It shall be a condition of employment that members of the Secretariat, who have been advised, under the terms of Rule 8.1, that they cannot comply with provision of the Regular Pension Scheme and/or Social Security Plans, make appropriate personal arrangements to cover, as necessary, retirement, medical and hospital, life and disability insurances, which shall be initiated as early as possible and duly documented before the end of the first year of employment. Costs to the member of the Secretariat of achieving this coverage shall be met by the Organization in accordance with such rules as it may prescribe, provided that such costs contributed by the Organization shall not exceed fourteen per cent (14%) of the total of the salary and salary-related allowances of the member concerned. Costs in excess of this figure shall be the responsibility of that member.

SECTION 9. TRAVEL AND TRANSPORTATION

Rule 9.1

All official travel shall require previous authorization by the Executive Secretary.

Rule 9.2

With regard to official travel, members of the Secretariat shall be entitled to a travel allowance, payable in advance for travel expenses, accommodation, daily living expenses, and any other type of expenses necessarily incurred by reason of travel.

Rule 9.3

Economy Class shall be utilized, wherever feasible, for air travel. Business Class shall be used on the authority of the Executive Secretary only. Exceptionally, when no reasonable alternative is available the Executive Secretary may approve the use of First Class. For land travel outside Canada First Class may be utilized on discretion of the Executive Secretary.

Rule 9.4

On completion of travel, the staff member shall submit, normally within 15 days, for the approval by the Executive Secretary, a detailed claim of expenses with, where reasonably possible, proof of expenditure.

Rule 9.5

Under the control of the Executive Secretary, members of the Secretariat who, in the course of their duties, are requested to use private motor vehicles for official travel or transportation purposes, shall be entitled to receive reimbursement of the costs involved in line with those available to the public sector of the host country. The costs associated with normal daily travel to and from place of work shall not be reimbursed.

Rule 9.6

On taking up an appointment, members of the Secretariat not residing within commuting distance, shall be eligible for:

- a) payment of travel expenses for arrival at post for the member and family from the place of residence to the location of the headquarters of the Organization;
- b) a "subsistence allowance" calculated on the basis of the relocation rules in force in the public sector of the host country;
- c) payment of removal costs including the shipment of personal effects and household goods from the place of residence to the location of the headquarters of the Organization, subject to a maximum volume of 40 cubic meters or one international standard shipping container;
- d) payment or reimbursement of sundry other expenses related to relocation, including insurance of goods in transit and excess baggage charges, on the basis of the relevant relocation rules in force in the public sector of the host country.
- e) Payments to staff members shall be subject to prior approval by the Executive Secretary.

Rule 9.7

After eighteen (18) months of service, and if the member of the Secretariat is recruited internationally, from outside Canada, the Organization shall pay, in accordance with Regulations 9.3 and 9.4, travel expenses for the member and family to visit the home country on annual leave.

This payment to include economy air fare, meal allowance, hotel accommodation and transportation costs to airports and stations while in travel status. Following this, home leave and its travel expenses shall be granted at two (2) year intervals provided that:

- a) family who benefit from this grant have resided in the host country for at least six (6) months prior to travel;
- b) It is understood that the member of the Secretariat will return to continue rendering services for a minimum additional period of six (6) months, or, unless otherwise authorized by the Organization, the accounts paid for his or her travel expenses will have to be returned.

SECTION 10. SEPARATION FROM SERVICE

Rule 10.1

Staff members may separate from service by giving four (4) weeks notice in writing to the Executive Secretary.

The Executive Secretary may separate from service by giving at least four (4) months written notice to the Organization.

Rule 10.2

The Executive Secretary may terminate the appointment of a staff member by giving three (3) months written notice, when that termination is due to restructuring of the Organization or of any of its constituent bodies, or if the Organization would decide to cease its functions. If at any time the Executive Secretary considers that the staff member does not give satisfactory service or fails to comply with the duties and obligations set out in these Rules, appointment of the staff member may be terminated upon written notice of one (1) month in advance.

Rule 10.3

The effective date of separation is the first working day after the date of termination of the notice period, except in the event of death of a member of the Secretariat, when it is the day after death and on that date all salary and related emoluments shall cease.

Rule 10.4

- a) In the event of separation for service with the Secretariat, staff members shall be compensated an indemnity equivalent to the rate of two (2) weeks current salary for every year of service, free of all deductions, limited to a maximum of 40 weeks;
- b) For the purposes of entitlements in accordance with these staff rules, an employee of the Professional Category (Rule 3.1(a)) may receive credit for continuous years of service prior to joining NAFO in federal or provincial governments (and international equivalencies) and in other international organizations as agreed by a signed contract between the employee and NAFO;
- c) the Executive Secretary will determine the acceptability of past years experience of an employee in the General Services Category (Rule 3.1(b)).

Rule 10.5

On separation from service, a member of the Secretariat shall be entitled to the following:

- a) payment of travel expenses from the place of residence for arrival at the former residence, for the member and family;
- b) payment of removal costs, including the shipment of personal effects and household goods from the place of residence to the former residence, subject to a maximum volume of forty (40) cubic meters or one (1) international shipping container;
- c) payment of reimbursement of sundry other expenses related to relocation, including insurance of goods in transit and excess baggage charges subject to the relevant rules and criteria applicable on appointment of the same member of the Secretariat;
- d) payments to staff members shall be subject to prior approval by the Organization on the recommendation of the Executive Secretary.

Rule 10.6

Upon separation, accrued unused annual leave shall be paid to any member of the Secretariat at the rate of the current salary at the time of separation but this monetary compensation will not be paid for more than a maximum of twenty-five (25) days plus the leave accrued during the year of separation. In case of death this money will be paid to the member's estate. In the event of termination of employment for reasons other than death or lay-off, the Organization will recover from the member of the Secretariat an amount equivalent to any unearned annual leave taken by that member, in anticipation of future days to be accrued.

Rule 10.7

In case of death of a member of the Secretariat, the Organization shall pay shipment of the remains from place of death to a place designated by the next of kin, limiting the payment of costs to those that correspond to shipping them to the deceased member's home for purposes of home leave or to the place from which personal effects or household goods were shipped.

Rule 10.8

In case of death, the family of a deceased member of the Secretariat shall be entitled to the payments specified in Rule 10.5 except that this right shall lapse if the travel is not undertaken within the six (6) months of the date of the member's death, except if a reasonable extension of that period of time is approved.

SECTION 11. TEMPORARY PERSONNEL*Rule 11.1*

The Executive Secretary may hire temporary personnel as necessary, by utilizing whenever possible, persons residing in the area in which the headquarters of the Organization are located.

SECTION 12. APPLICATION AND AMENDMENT OF STAFF RULES*Rule 12.1*

Any doubts concerning the interpretation or application of these Rules shall be resolved by the Executive Secretary unless it applies to the Executive Secretary in which case the General Council shall be consulted. The Executive Secretary shall submit to approval by the General Council at its next meeting any resolution taken previously under the terms of this Rule.

Rule 12.2

All matters not foreseen in these Staff Rules shall be brought to the attention of the Organization by the Executive Secretary.

Rule 12.3

Any changes in these Staff Rules must be approved by the General Council in accordance with its Rules of Procedure, on the advice of STACFAD.

Annex 7. Press Release

Northwest Atlantic Fisheries Organization 13th Annual Meeting – September 1991

1. The 13th Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO) was held in Dartmouth, Nova Scotia, Canada during 9-13 September 1991, under the chairmanship of K. Hoydal (Denmark in respect of the Faroe Islands and Greenland), President of NAFO. The sessions of the General Council, the Scientific Council, and the Fisheries Commission and all subsidiary bodies were held at the Holiday Inn.
2. The delegations attending the meeting were from the following Contracting Parties: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Norway, Poland and the Union of Soviet Socialist Republics (USSR). Observers from the United States of America were present at the meeting.
3. The Scientific Council, under the chairmanship of B. W. Jones (EEC), provided the scientific assessment and recommendations pursuant to the Convention on the management of the fishing stock in the Convention Area. The Chairman of the Scientific Council reported to the Fisheries Commission on the questions pertaining to the scientific basis for the management and conservation of fishery resources within the Regulatory Area.
4. Under the umbrella of the Scientific Council there was a Symposium on "Changes in abundance and biology of Cod stocks and their possible causes". The Symposium was held at NAFO Headquarters in Dartmouth during 4-6 September. The Scientists from different Contracting Parties presented and discussed 24 reports and papers on the different topics of major changes in abundance of cod stocks and their biology in relation to environmental variability and as functions of the fisheries. The scientific presentation will be published in 1992 as the Scientific Council Studies which will contribute further to better understanding of the basic principles of the management of the cod stocks.
5. The Fisheries Commission, under the chairmanship of M. Yeadon (Canada) considered and took decisions on several important issues pertaining to the management and conservation of the fisheries resources in the Regulatory Area as follows:

On the basis of the scientific advice from the Scientific Council the Contracting Parties agreed on the Total Allowable catches and allocations in 1992 for the fishing stocks which are either entirely in the Regulatory Area or associated with the stocks within the 200-mile fishing zones. The TACs and allocations decided by the Commission are presented in the attached Quota Table.

On the basis of the deliberations and presentation of the Standing Committee on International Control (STACTIC) under the chairmanship of O. Muniz (Cuba), the Fisheries Commission adopted new proposals for international measures of control and enforcement within the Regulatory Area for the purpose of improvements on inspection and surveillance in the Regulatory Area. In a new Scheme of Joint International Inspection and Surveillance there are provisions for coordination of all "Hail System" reports on activity of the fishing vessels in the Regulatory Area via the NAFO Headquarters in Dartmouth and implementation of the aircraft surveillance.

6. The Contracting Parties agreed to continue the moratorium for 1992 on cod fishing by Contracting Parties in Division 3L outside the 200-mile Canadian Zone, in the continuation of the conservation measures for the purpose of the stock recuperation.
7. Upon the presentation of the Standing Committee on Finance and Administration (STACFAD), the General Council adopted the Organization's budget and accounts for 1992.
8. The new Standing Committee on Fishing Activities by non-Contracting Parties in the Regulatory Area (STACFAC), under the chairmanship of C. C. Southgate (EEC), examined important questions on the fishing by vessels of non-Contracting Parties and presented its report and recommendations to the General Council, which adopted further measures designed to curtail and eliminate such unregulated fishing in the Regulatory Area. The most important measures include; active diplomatic initiatives individually and jointly, intensive effort from the office of the Executive Secretary in communication with non-Contracting Parties, improvement in statistical information on non-Contracting Parties catches and on imports of ground-fish species from non-Contracting Parties whose vessels fish in the NAFO Regulatory Area.
9. The General Council endorsed the UN Resolution 45/197 on large-scale pelagic drift-net fishing and reconfirmed that such fishing is not presently practiced by NAFO Contracting Parties in the Convention Area.
10. Several elections took place for Chairmen and Vice-Chairmen of constituent and subsidiary bodies of the Organization, as follows:

Chairman of the General Council, President
of the Organization

- K. Yonezawa (Japan)

Vice-Chairman of the General Council

- P. Gullestad (Norway)

Chairman of the Fisheries Commission

- E. Wiseman (Canada)

Vice-Chairman of the Fisheries Commission

- P. Hillenkamp (EEC)

Chairman of the Scientific Council

- V. P. Serebryakov (USSR)

Vice-Chairman of the Scientific Council

- H. Lassen (Denmark in respect of the of the Faroe Islands and Greenland)

Chairperson of the Standing Committee on
Finance and Administration (STACFAD)

- D. Gill (Canada)

Vice-Chairman of the Standing Committee on
Finance and Administration (STACFAD)

- H. Koster (EEC)

Chairman of the Standing Committee on
International Control (STACTIC)

- E. Lemche (Denmark in respect of the Faroe Islands and Greenland)

NAFO Secretariat
Dartmouth, Nova Scotia, Canada
13 September 1991

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 1992 of particular stocks in Subareas 3 and 4 of the NAFO Convention Area. The values listed include quantities to be taken both inside and outside the 200-mile fisheries zone, where applicable.

Contracting Party	Cod		Redfish		American plaice		Yellowtail	Witch	Capelin	Squid (Illex) ^{2,3}
	Div. 3M	Div. 3NO	Div. 3M	Div. 3LN	Div. 3M	Div. 3LNO	Div. 3LNO	Div. 3NO	Div. 3NO	Subareas 3+4
1. Bulgaria	-	-	645	-	-	-	-	-	-	500
2. Canada	100	6 484	1 075	5 964	150	25 425	6 825	3 000	800	N.S. ⁴
3. Cuba	480	-	3 762	1 372	-	-	-	-	750	2 250
4. Denmark (Faroe Islands and Greenland)	2 900	-	-	-	-	-	-	-	-	-
5. European Economic Community	6 465	5 016	6 665	476	350	328	140	-	750	N.S. ⁴
6. Iceland	-	-	-	-	-	-	-	-	-	-
7. Japan	-	-	860	-	-	-	-	-	2 800	2 250
8. Norway	1 200	-	-	-	-	-	-	-	9 000	-
9. Poland	500	-	-	-	-	-	-	-	900	1 000
10. USSR	1 270	1 624	29 777	6 104	1 000	-	-	1 950	15 000	5 000
11. Others	50	476	216	84	500	47	35	50	-	5 000
12. Special Reservation ¹	-	-	-	-	-	-	-	-	-	-
Total Allowable Catch	12 965	13 600	43 000	14 000	2 000	25 800	7 000	5 000	30 000	150 000 ⁵

¹ There are no Special Reservations for 1992.

² The opening date for the squid (*Illex*) fishery is 1 July.

³ Any quota listed for squid may be increased by a transfer from any "coastal state" as defined in Article 1, paragraph 3 of the NAFO Convention, provided that the TAC for squid is not exceeded. Transfers made to Contracting Parties conducting fisheries for squid in the Regulatory Area shall be reported to the Executive Secretary, and the report shall be made as promptly as possible.

⁴ Not specified because the allocation to these Contracting Parties are as yet undetermined, although their sum shall not exceed the difference between the total of allocations to other Contracting Parties and the TAC.

⁵ The TAC would remain at 150 000 tons subject to adjustment where warranted by scientific advice.

PART II

(pages 57-95)

Activities of the Fisheries Commission in 1991

List of Meetings

The following meetings were held under the authority of the Fisheries Commission:

- ◇ First Meeting of the STACTIC Working Group on Improvements to Inspection and Control in the Regulatory Area; 17-19 October 1990*, Brussels, Belgium.
- ◇ Second Meeting of the STACTIC Working Group on Improvements to Inspection and Control in the Regulatory Area; 3-5 July 1991, NAFO Headquarters, Dartmouth, Nova Scotia, Canada.
- ◇ Fisheries Commission and STACTIC Meetings at the 13th Annual Meeting; 9-13 September, Holiday Inn, Dartmouth, Nova Scotia, Canada.

* Note: Since the results of this Meeting held at the end of 1990 were very important for the Fisheries Commission activities in 1991, a brief summary of the decisions of the Meeting is included in the Annual Report for 1991.



First Meeting of the STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

The STACTIC Working Group on Improvements to Inspection and Control in the Regulatory Area was established in accordance with the Fisheries Commission decision (FC Doc. 90/8). The Terms of Reference for the Working Group are listed in Annex 1.

The Working Group met on 17-19 October 1990 in Brussels, Belgium. Full Proceedings of this Meeting are presented in FC Doc. 91/1. The following Contracting Parties were present: Canada, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Norway and the Union of Soviet Socialist Republics (USSR) (Annex 2). P. Ogden (EEC) was elected Chairman and L. Strowbridge (Canada) was appointed Rapporteur. The Agenda for the Meeting was adopted as it is in Annex 3.

The following recommendations were formulated by the Working Group for consideration and adoption by the Fisheries Commission:

The Working Group concluded that the optimization of inspection resources and their effective coordination could be advanced through exchanges of surveillance information (inspections, sightings and apparent infringements) between Contracting Parties that operate inspection vessels in the Regulatory Area. Guidelines for the coordination and optimization of inspection and control in the Regulatory Area are as follows:

Guidelines for the Coordination and Optimization of Inspection and Control in the Regulatory Area

1. Contracting Parties engaged in surveillance or inspection activities in the Regulatory Area shall, where possible, co-ordinate their efforts through an exchange of information.
 - a) Inspection vessels shall provide notification to Executive Secretary and competent authorities/inspection vessels of Contracting Parties with an inspection presence in the Regulatory Area of their arrival in the Regulatory Area. This notification should be completed as far in advance as is practicable and include the inspection vessel's name, radio call sign, communication capability, name(s) of NAFO inspectors and ETA/ETD Regulatory Area.
 - b) In response to the notification outlined in (a), inspection vessels operating in the Area at the time, or, where appropriate, the competent authorities of those Contracting Parties which have an inspection/surveillance presence in the Area, shall provide to the inspection vessel which is entering the Area a list of sightings/boardings (including dates/positions) which have been conducted in the previous ten-day period and other relevant information, as appropriate.
 - c) Inspection vessels operating in the Regulatory Area, once the exchange of information described in (a) and (b) has taken place and means of communication established, shall maintain contact, as far as possible on a daily basis, and with due regard to radio security, in order to exchange information on boardings/sightings or other relevant information and to co-ordinate their activities.

2. Contracting Parties engaged in inspection or surveillance activities in the Regulatory Area shall undertake to prepare reports of inspection activity, based on a calendar year, outlining details of boardings, sightings and apparent infringements (including disposition).
3. Contracting Parties shall, where possible, exchange inspectors to develop a consistent approach to inspection and control in the Regulatory Area.

The STACTIC Working Group recommended that the Guidelines for the Coordination and Optimization of Inspection and Control in the Regulatory Area be adopted by the Fisheries Commission and implemented by all Contracting Parties in 1991. The Working Group concluded that an effective hail system would improve inspection and control in the Regulatory Area. A consensus was reached on amendments to the NAFO Conservation and Enforcement Measures to provide for implementation of a hail system, as follows:

Proposed Amendment to the NAFO Conservation and Enforcement Measures

PART III

1. A Contracting Party shall ensure that vessels of that Party to which the Scheme of Joint International Inspection applies shall report to their competent authorities:
 - a) each entry into the Regulatory Area. This report shall be made at least six (6) hours in advance of the vessel's entry and shall include the date, the time and geographical position of the vessel.
 - b) each exit from the Regulatory Area and each movement from one NAFO division to another NAFO division. This report shall be made prior to the vessel's exit from the Regulatory Area or entry into a NAFO division and shall include the date, time and geographical position of the vessel.

Without prejudice to Schedule II of Part V of the NAFO Conservation and Enforcement Measures, after each radio or fax transmission of information to the competent authorities of Contracting Parties the following details are to be immediately entered in the logbook:

- ◇ Date and time of transmission
 - ◇ In cases of radio transmissions, name of radio station through which the transmission is made
2. Within twenty-four (24) hours of receipt of these reports, whenever possible, competent authorities of each Contracting Party shall transmit the information contained therein to other Contracting Parties with an inspection presence in the Regulatory Area. The information shall also be forwarded to the Executive Secretary as soon as possible.

It was agreed by the Working Group that, following implementation of the hail system, an evaluation of its operation and an assessment of its effectiveness would be conducted at the next meeting of the Working Group in July 1991 and a report prepared for submission to STACTIC and the Fisheries Commission at the 1991 Annual Meeting.

With respect to the role of aerial surveillance in monitoring compliance by fishing vessels with this hail system, all Parties agree that aerial surveillance is an important tool to ensure compliance. The Working Group agreed that proposals for amendment of the Conservation and Enforcement Measures to provide for this surveillance tool should be submitted to the Executive Secretary by 31 March 1991.

The Working Group concluded that the requirement for fishing vessels and gear to be marked for easy identification would improve inspection and control in the Regulatory Area.

The requirement for fishing vessels and gear to be marked for easy identification would require amendments to the Conservation and Enforcement Measures as follows:

**Proposed Amendment to the NAFO Conservation
and Enforcement Measures**

PART II - GEAR

- a) A new paragraph "D", "Marking" to be added to Part II, "Gear" and to consist of the following:
1. Small boats carried on board fishing vessels shall be marked with the letter(s) and/or number(s) of the vessel to which they belong.
 2. Marker buoys and similar objects floating on the surface and intended to indicate the location of fixed fishing gear shall be clearly marked at all times with the letter(s) and/or number(s) of the vessel to which they belong.
- b) Part III "Notification" to be amended to "Vessel Requirements".
- c) A new paragraph "A" entitled "Marking of Fishing Vessels" to be inserted and to consist of the following:
- "Each Contracting Party shall ensure that each of its fishing vessels operating in the Regulatory Area be marked as follows:
- The letter(s) of the port or district in which the vessel is registered and/or the number(s) under which it is registered shall be painted or displayed on both sides of the vessel high above the water as possible so as to be clearly visible from the sea and the air in a colour contrasting with ground on which they are painted".
- d) A new paragraph "B" entitled "Documentation" to be inserted and to consist of the following:
1. Each Contracting Party shall ensure that each of its fishing vessels over ten (10) metres in length shall carry on board documents issued by the competent authority of the State in which it is registered showing at least the following elements:
 - ◇ its name, if any
 - ◇ the letter(s) of the port or district in which it is registered, and the number(s) under which it is registered
 - ◇ its international radio call sign, if any

- ◊ the names and addresses of the owner(s) and, where applicable, the charterers
 - ◊ its length and engine power
2. Each Contracting Party shall ensure that each of its fishing vessels over seventeen (17) metres in length which freeze or salt fish shall keep on board up-to-date drawings or descriptions of their fish rooms, including an indication of their storage capacity in cubic metres.
 3. The documents referred to in paragraphs 1 and 2 above shall be certified by the competent authority of the State in which the vessel is registered.

Any modification of the characteristics contained in the documents referred to in paragraphs 1 and 2 shall be certified by a competent authority and the method by which any modification of engine power has been carried out and clearly explained.

The documents referred to in this Section shall be produced for the purposes of control upon request of an assigned NAFO inspector.

- e) Present paragraphs "A" "**Notification of Research Vessels**" and "B" "**Notification of Fishing and Processing Vessels**" to become new paragraphs "C" and "D".

The Working Group discussed other measures that may be appropriate to improve inspection and control in the Regulatory Area. It was agreed that the Working Group keep short-term measures (ie: improved cooperation, marking of fishing vessels and gear, and the hail system) under review and report findings to the next meeting. Recognizing that consideration of long-term measures would depend, to a large extent, on the success of these short-term measures, it was agreed that long-term measures be discussed in detail at the next STACTIC Working Group meeting.

Working Group activities with respect to long-term measures would include the following:

- a) the preparation of papers on the logistical/feasibility of adopting in the Regulatory Area the following:
 - i) an international observer scheme,
 - ii) an electronic tracking system, or
 - iii) a licensing system for the Regulatory Area.

Annex 1. Terms of Reference*

STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

The Fisheries Commission directed STACTIC to prepare the terms of reference for the development of both the short-term and long-term tasks outlined in NAFO/FC Doc. 90/8 (Revised) and any other measures which might be appropriate to improve control in the Regulatory Area.

Terms of Reference

1. Short-term Measures

- a) The compilation of a detailed report on:
 - i) the optimization of inspection resources and their effective coordination, including the exchange of inspectors between Contracting Parties;
 - ii) the development of a hail system;
 - iii) the requirement for vessels and gear to be marked for easy identification; and
 - iv) any other measures which might be appropriate.
- b) The report would address the legal and practical aspects and the financial burden of implementing the short-term measures for Contracting Parties as well as the Secretariat of NAFO.
- c) In addition the report will give consideration to how the detailed implementation of the measures could be achieved.
- d) In anticipation of the approval of any possible proposals a paper will be prepared and presented outlining the consequent amendments to the Conservation and Enforcement Measures and the Scheme of Joint International Inspection.
- e) Deadline: To be presented to the Fisheries Commission for consideration by 1 December 1990.

The EEC delegation agree to convene the initial working group meeting and will coordinate with other Contracting Parties concerning the practical arrangements for the meeting and circulation of appropriate documents. Contracting Parties will notify the EEC delegation of the names of their contacts.

It is proposed that the first working group meeting be held in Brussels from 16 to 19 October 1990 in Brussels.

* FC Doc. 90/9.

2. Long-term Measures

- a) The preparation of papers on the feasibility of adopting in the Regulatory Area the following:
 - i) An International Observer Scheme
 - ii) An electronic tracking system
 - iii) A licensing system
 - iv) Any other measures which may be considered as appropriate.

In the light of the analysis made of papers presented a more detailed report will be drawn up which would address the feasibility of the implementation of such measures taking into account the associated legal, practical and financial considerations.

- b) The working group will undertake a comprehensive review of the Conservation and Enforcement Measures and the Scheme of Joint International Inspection.

The working group will report back to the Fisheries Commission on the progress made on the long-term measures at the next annual meeting of NAFO.

Annex 2. List of Participants

STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

17-19 October 1990, Brussels Belgium

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SECRETARIAT

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Annex 3. Agenda

STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

Brussels, Belgium 17-19 October 1990

1. Appointment of Chairman
2. Appointment of Rapporteur
3. Adoption of Agenda
4. The optimization of inspection resources and their effective coordination, including the exchange of inspectors between Contracting Parties.
5. The development of a hail system
6. The requirement for vessels and gear to be marked for easy identification
7. Any other measures which might be appropriate
8. Any other business
9. Time and Place of Next Meeting
10. Adjournment

Second Meeting of the STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

The Second Meeting of the STACTIC Working Group on Improvements to Inspection and Control in the Regulatory Area was held at the NAFO Headquarters in Dartmouth, Nova Scotia, Canada on 3-5 July 1991. Full Proceedings of this Meeting are presented in FC Doc. 91/2.

The following Contracting Parties were present: Canada, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Norway and the Union of Soviet Socialist Republics (USSR) (Annex 1).

P. Ogden (EEC) was appointed Chairman and R. J. Prier (Canada) was appointed Rapporteur.

The adopted Agenda is presented in Annex 2.

Evaluation of Operation and Assessment of Effectiveness of the Hail System

Since hail reports have only been received from Japan, Denmark (in respect of the Faroe Islands and Greenland) and Cuba to-date on a voluntary basis prior to the hail system's tentative official acceptance on 17 July 1991, delegates were unable to comment on the ultimate effectiveness of the system. The following recommendation was accepted by the Working Group:

Contracting Parties will ensure all hail reports transmitted by them will be sequentially numbered. The Contracting Parties will forward, within twenty-four (24) hours of receipt of these reports, whenever possible, the hail reports to Contracting Parties with an inspection presence in the Area and at the same time transmit the hail report to the Executive Secretary. The Executive Secretary will verify that all hail reports have been received by checking sequential numbering and verify any discrepancies with the Contracting Party concerned. The hail reports are to be treated in a confidential manner.

Consideration of aerial surveillance as a tool to ensure compliance with the hail system

The representative of Canada outlined how the aerial surveillance to be used in the Regulatory Area allowed for more effective and efficient deployment of their resources assigned to conservation within the Regulatory Area. It also provided a capability to detect air detectable apparent infringements of vessels fishing in areas where they are not authorized. The Contracting Parties agreed with such arguments and decided to continue their discussions within the Conservation and Enforcement Measures in a structured way.

Review of Conservation and Enforcement Measures

Discussions concentrated around the Comparative Working Draft of Canadian, EEC and Executive Secretary proposals (STACTIC Working Paper 91/4) to modify the Conservation and Enforcement Measures.

The agreement was reached to defer the discussions on long-term issues to a future meeting and proceed with the amendments to accommodate the hail reports and aerial surveillance.

The Japanese representative presented an amendment to the hail system as follows:

Within twenty-four (24) hours of receipt of these reports, whenever possible, competent authorities of each Contracting Party shall transmit the information contained therein to the Executive Secretary. The Executive Secretary shall transmit the information to other Contracting Parties with an inspection presence in the Regulatory Area as soon as possible.

As the result of discussion of Part IV Scheme of Joint International Inspection, the representatives agreed to work from the EEC draft (STACTIC Working Paper 91/5) and this Working Paper had been included in the basic STACTIC Working Paper 91/4.

The Executive Secretary presented a proposal for new formats of the Conservation and Enforcement Measures (STACTIC W.G. Working Paper 91/1) sent to Contracting Parties on 19 April 1991 (GF/91-175). One format shall be an official document consisting of the official text. The second format shall be produced for the purpose of the Inspector's Manual issued to all inspection vessels in the Regulatory Area, consisting of some additional items to the official text (quota tables, list of inspectors and inspection vessels, resolutions for regulations and enforcement in the Regulatory Area, etc.). The Working Group agreed to consider and recommend these formats to the Fisheries Commission at the Annual Meeting.

Consideration of the time frame of implementation of the "short-term" measures and of the associated costs to the NAFO Secretariat

The following agreement was reached: STACTIC Working Paper 91/4 was approved with the amendments incorporated. The Executive Secretary was requested to prepare a cost for implementation of the hail system taking into consideration the Japanese amendment. The Executive Secretary was requested to report back to the Working Group at the annual meeting on his findings and be prepared to address any increased costs to STACFAD at the annual meeting.

Discussion on the feasibility of the implementation of the "long-term" measures and its legal, practical and financial issues

Due to time constraints, it was agreed to defer this item to a future meeting of the Working Group.

Elaboration of the report to the Fisheries Commission on the progress made as the result of the two meetings of the Working Group (concrete proposals, recommendations)

The framework from which the Executive Secretary will prepare a draft text for consideration by the Working Group for presentation to the Fisheries Commission at the next annual meeting is the following:

The Group examined suggestions made by the delegations of Denmark (in respect of the Faroe Islands) and Japan as contained in STACTIC W.G. Working Paper 91/2 and 91/3, and agreed to recommend their adoption to the Fisheries Commission. The Working Group also recommended that the Fisheries Commission request advice from the Scientific Council as outlined in STACTIC W.G. Working Paper 91/6.

A number of other proposals to amend Parts I and II of the Conservation and Enforcement Measures require further discussion. The Working Group recommended to the Fisheries Commission that it should meet during the course of the 13th Annual Meeting in September 1991 to pursue its work on these proposals and to consider other possible amendments to the hail system.

The Executive Secretary was requested by the Working Group to examine and report to the Working Group on the cost of implementing the proposed amendments to the hail system. The Executive Secretary's report would be submitted thereafter to STACFAD.

Time did not permit discussion of the long-term measures as contained in FC Doc. 90/9. The Working Group recommended to the Fisheries Commission that it should begin examination of these matters at the 13th Annual Meeting in September 1991.

Annex 1. List of Participants

STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

3-5 July 1991, Dartmouth, Nova Scotia, Canada

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Annex 2. Agenda

STACTIC Working Group on Improvements to Inspection and Control in the NAFO Regulatory Area

Dartmouth, Nova Scotia, Canada, 3-5 July 1991

1. Appointment of Chairman
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Evaluation of operation and assessment of effectiveness of the hail system
5. Consideration of aerial surveillance as a tool to ensure compliance with the hail system
6. Review of the Conservation and Enforcement Measures
7. Consideration of the time frame of implementation of the "short-term" measures and of the associated costs for the NAFO Secretariat
8. Discussion on the feasibility of the implementation of the long-term measures and its legal, practical and financial issues
9. Elaboration of the report to the Fisheries Commission on the progress made as the result of the two meetings of the Working Group (concrete proposals, recommendations)
10. Time and Place of Next Meeting
11. Other Matters
12. Adjournment

Fisheries Commission Meeting 13th Annual Meeting, 9-13 September 1991

The Fisheries Commission Meeting, which includes its subsidiary body – Standing Committee on International Control (STACTIC) – was held during the 13th Annual Meeting on 9-13 September 1991 at the Holiday Inn, Dartmouth, Nova Scotia, Canada. Full Proceedings of this Meeting are presented in FC Doc. 91/14. The meetings of STACTIC were held daily during 9-13 September. The meetings of the Fisheries Commission were held daily during 10-13 September. This Annual Report presents brief summaries of the most important developments at the Fisheries Commission Meeting under its agenda including STACTIC.

Opening of the Meeting (Agenda items 1 to 5)

The 13th Annual Meeting of the Fisheries Commission was opened by O. Muniz (Cuba), Chairman of STACTIC in accordance with Rule 3.6 of the Rules of Procedure for the Fisheries Commission which states: "If the offices of the Chairman and Vice-Chairman are vacated, the Chairman of the Standing Committee on International Control shall exercise the powers and duties prescribed for the Chairman and the first order of business at the next meeting shall be the election of a Chairman and Vice-Chairman for the balance of the term."

M. Yeadon (Canada) was elected as an interim Chairperson and A. Donahoe (Canada) was appointed Rapporteur.

The members of the Fisheries Commission present were: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Japan, Norway, Poland and the Union of Soviet Socialist Republics (USSR) (Annex 1). Observers from the United States of America were present.

The adopted Agenda is presented in Annex 2.

Administrative (Agenda items 6 to 9)

The report of the 12th Annual Meeting, September 1990 (FC Doc. 90/12) was adopted.

The Commission noted that the (ex) German Democratic Republic (GDR) had ceased to be a Contracting Party to the Convention on 31 December 1990 and the EEC had succeeded to former GDR's rights and obligations under the NAFO Convention. This brought the total number of the Fisheries Commission members to nine and a quorum to six.

The Commission unanimously elected E. Wiseman (Canada) and P. Hillenkamp (EEC) as Chairman and Vice-Chairman of the Fisheries Commission, respectively, for the period 1992-1993.

Decision on clarification of the Rules of Procedure regarding the seconding of motions was referred to the General Council.

Commission Proposals (Agenda items 10 and 11)

The consolidated text of the Status of Proposals was adopted as circulated. The documents of the STACTIC Working Group on Improvements to Inspection and Control (FC Docs. 91/1, 91/2,

STACTIC W.G. Working Paper 91/17, FC Working Paper 91/1) presented by the Chairman of STACTIC were adopted subject to further consideration by STACTIC during this meeting. The USSR reserved its position on the STACTIC W.G. Working Paper 91/17.

International Control (Agenda items 12 to 14)

The Canadian representative made a statement on effective international control in which he focused on the problems facing NAFO as an institution and as a practical fishing organization (Annex 3).

The Chairman of STACTIC delivered the Report on the deliberations of STACTIC (FC Doc. 91/14, Part II) and proposals for additional amendments to the Conservation and Enforcement Measures (FC Doc. 91/7) which were adopted by the Fisheries Commission. The USSR representative asked to note that the USSR would lodge a formal objection to the air surveillance amendments.

The Commission adopted the EEC and Canadian proposals for amendment of the Conservation and Enforcement Measures (Annex 4-FC Doc. 91/9). These proposals as underlined in the text should be transmitted further to the Contracting Parties in accordance with the provisions of Article XII.1 of the Convention.

The further proposals were agreed by the Commission: to examine the cost effectiveness of implementation of the amendments and consider other ways to improve the hail system (Canada); to consider (by the Scientific Council) whether effective scientific assessment required reporting catches by precise division along divisional lines for each stock (EEC).

Transfer of Quotas between Contracting Parties

The Representative of Denmark (in respect of the Faroe Islands and Greenland) suggested that the "Others" quota could be used to provide additional quotas to Contracting Parties with low quotas, referring to the practice of quota exchange between Parties with large quotas. The decision was reached to defer the discussion on the issue to an appropriate opportunity later.

Summary of Scientific Advice by the Scientific Council (Agenda item 16)

The Chairman of the Scientific Council (B. Jones, EEC) answered the questions of the Fisheries Commission at its last meeting on the following subjects: Cod in Division 2J and 3KL, flounder in Divisions 3LNO; witch flounder in Divisions 3NO; squid in Subareas 3 and 4; capelin in Divisions 3NO. Comments were presented for the following stocks: 3M cod, 3NO cod, 3M redfish, 3LN redfish, 3M American plaice, 3LNO American plaice, 3NO witch flounder, 3LNO yellowtail flounder; 3NO capelin and squid in Subareas 3 and 4. (The assessments of all stocks are presented in the Scientific Council Reports for 1991; see also Part III of this Report.)

Regarding this presentation, the EEC representative urged the Scientific Council to provide a series of management options at the 14th Annual Meeting in September 1992, including the risks

associated with each option, for all NAFO managed stocks. It was an urgent priority to obtain data on the various stocks, and the EEC would increase its efforts to provide all available information. The Canadian Representative pointed out that the lack of analytical assessments was caused by absence of adequate data for such assessments that masked bad news concerning the health of the stocks.

During the discussion, further major considerations were expressed by the Contracting Parties for each stock in the following Divisions of the Convention Area:

3M Cod

There was a need to understand the high fishing mortality and its implications, in light of the biomass being at the lowest limit of its critical size. Better surveillance and control was needed to end massive unreported catches, and for halting disproportionately high catches of small fish, minimum fish size in addition to mesh size requirements could be helpful. The Scientific Council was asked to advise on the appropriate mesh size to utilize yield-per-recruit.

3M Redfish

The actual biomass was on a clear downward trend in the last years, and for the last five years catches had exceeded TACs. The stock could not sustain the high catches of recent years, and catches should be reduced to help the stock stabilize and recover. The TAC should be set in line with management objectives for recovery of the stock and sustainable exploitation.

3M American plaice

The catches were reduced in 1990, apparently due to effort being diverted to other fisheries. The age composition data was required from commercial catches to assist the scientific assessment in 1992.

3NO Cod

The biomass had declined to the lowest level observed and the establishment of more conservative TACs for rebuilding the stock was required. However, an analytical assessment was not possible in 1991 due to unacceptable high uncertainty resulting from unreported catches. While sampling had improved, the main obstacle was still the absence of sampling of illegal catches, which data would be needed to construct length and age composition of the total catch.

3LN Redfish

There were no deliberations on this stock.

3LNO American plaice

There was concern of the use of an "effective mesh size" less than allowed by the Conservation and Enforcement Measures which could be achieved by net rigging or other techniques. This could affect high mortality, reduce yield-per-recruit and eliminate fish before they recruit to the spawning biomass. As the Scientific Council noted there was no justification for using a mesh size smaller than 130 mm. Because of the high level of unreported and, therefore, unsampled catches, an analytical assessment was not possible and a range of management options were not affected. The management measures for this stock should include control of exploitation patterns in addition to TACs and for this purpose, the Scientific Council should provide a range of technical options. The Scientific Council was requested for analysis of technical interactions among fisheries for different species (skate, wolffish and American plaice).

3LNO Yellowtail

South Korean non-Contracting Party vessels had drastically increased their catch in 1990 up to 6 000 tons which constituted an estimated 42% of the total catch. The sampling data for this catch were unavailable.

3NO Witch

To be able to perform a satisfactory evaluation, research vessels should sample the deeper waters that are exploited by the commercial fishery.

3L & 3NO Capelin

The acoustic survey findings of the reduction in estimated biomass from the estimate of a similar survey conducted in the previous year on 3L capelin were unexpected and unexplained. There had been unusual environmental conditions in the area in the current year but it was not known whether these were the cause of the apparent decline in abundance in 3L. The scientists of the Scientific Council believed that capelin stocks in the two areas were not completely independent. The Scientific Council noted that in the absence of a proper assessment, the Council could not evaluate some options and the effect of a 20% exploitation rate (USSR request).

3+4 Squid

There was no discussion on this fishery. The recommended TAC remained at 150 000 tons.

2J3KL Cod

It was pointed out that all Parties fishing the stock should have access to the same information as a dynamic analysis should review fisheries both inside and outside 200 miles. The request for future work by the Scientific Council would be dealt with under another Agenda item.

Management Measures for Fish Stocks in the Regulatory Area (Agenda items 17,18)

The deliberations were conducted in two stages. First, there were informal proposals for management of each stock (see FC Doc. 91/14, p. 12-14) and at the second stage the Contracting Parties decided on the formal proposal. All votes for formal proposals were held by the formula: "affirmative (for), against, abstain", as presented hereinafter.

3M Cod

Proposal: Denmark (in respect of the Faroe Islands and Greenland), seconded by the USSR, proposed a TAC of 12 965 tons with a minimum legal length of 40 cm. The result of the vote: for = 7, against = 1 (Canada), abstain = 0; proposal was carried.

The following recommendations were made by the Contracting Parties: the Scientific Council should recommend ways to improve fishing patterns (by EEC); to reduce catches of undersized fish, catches of small fish should be retained and reported (by EEC); consideration should be given to imposing controls on discards of small fish and whether such discards should count against quotas (by Canada).

In the process of the discussions, the Canadian representative reviewed the achievements of NAFO against its objectives. He concluded that NAFO was not the success it could be and the negative consequences of this affected all Contracting Parties fishing in the Regulatory Area. He called for a re-examination of NAFO, bearing in mind the future of families dependent of fisheries. A process for reform was needed and to that end, Canada was proposing a special meeting to consider appropriate measures.

3M Redfish

Proposals: 1) TAC 45 000 tons (by EEC); for = 1 (EEC), against = 6, abstain = 1 (USSR); defeated.

- 2) TAC 43 000 tons (by Norway); vote: for = 6, against = 0, abstain = 2 (USSR, EEC); carried.

3M American plaice

Proposals: 1) TAC 2 200 tons (by EEC); vote: for = 1 (EEC), against = 6, abstain = 1 (USSR); defeated.

- 2) TAC 2 000 tons (by Canada); vote: for = 6, against = 0, abstain = 2 (USSR, EEC); carried.

3NO Cod

Proposal: TAC 13 600 tons (by Canada), minimum fish size of 40 cm (by EEC); carried; consensus.

3LN Redfish

Proposal: TAC 14 000 tons (by Canada); vote: for = 6, against = 0, abstain = 2 (EEC, USSR); carried.

3LNO American plaice

Proposal: TAC 25 800 tons (by Canada); carried; consensus.

3LNO Yellowtail flounder

Proposal: TAC 7 000 tons (by Canada); carried; consensus.

3NO Witch flounder

Proposal: TAC 5 000 tons (by Canada); vote: for = 7, against = 0, abstain = 1 (EEC); carried.

The Scientific Council should recommend technical measures to achieve the reduction of catches of juvenile fish (by EEC).

3NO Capelin

Proposal: TAC 30 000 tons, subject to review in early 1992 following the meeting of the Scientific Council (by Canada); carried; consensus.

The Scientific Council was requested to provide a solid scientific basis for its recommendation (by USSR).

3+4 Squid

Proposal: TAC 150 000 tons (by Canada); vote: for = 6, against = 0, abstain = 2 (EEC, USSR); carried.

3L Cod (in the Regulatory Area)

Proposal: Moratorium in the Regulatory Area for 1992 (by Canada); vote: for = 4 (Japan, Cuba, USSR, Canada), against = 0, abstain = 4 (Denmark, EEC, Poland, Norway); carried.

The Fisheries Commission requested the Executive Secretary to develop rules of procedure for adoption of TACs that did not require the seconding of proposals. For the distribution of TACs among the Contracting Parties, the existing traditional distribution key based on the "Quota Table" in Schedule I of the Conservation and Enforcement Measures was adopted for 1992 by consensus (Annex 5).

The EEC representative noted the EEC reservation with respect to the stocks on which it had abstained in the vote on TACs.

At the conclusion, the Scientific Council replied to the Contracting Parties requests that the application of a minimum mesh size of 130 mm throughout the Regulatory Area was appropriate with specific exceptions for capelin and squid.

As for the lengths of American plaice, yellowtail and witch flounder that would be retained by 130 mm mesh size, the data were available only for yellowtail and those were that the size at which 5% would be retained was 21.5 cm (and 23 cm corresponded to 10% retention).

The Fisheries Commission's Requests for Scientific Advice on Management in 1993 of Certain Stocks in Subareas 3 and 4 was formulated as given in Annex 6.

Adjournment (Agenda items 20 to 22)

The EEC representative asked that its request for an assessment of the minimum cod size that may be caught in the Regulatory Area be referred to the next meeting of the Fisheries Commission.

The next meeting will be held upon the decision of the General Council.

Annex 1. List of Participants

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9-13 September 1991

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Annex 2. Agenda

**13th Annual Meeting of NAFO
Holiday Inn, Dartmouth, Nova Scotia, Canada
9-13 September 1991**

FISHERIES COMMISSION

Opening Procedures

1. Opening by the Chairman of STACTIC, O. Muniz (Cuba).
 - a) Election of an interim Chair for the Meeting
 - b) Opening by the Chairperson M. Yeadon (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Admission of Observers
5. Publicity

Administration

6. Approval of the Report of the 12th Annual Meeting, September 1990 (FC Doc. 90/12, Revised)
7. Review of Commission Membership (withdrawal of GDR: letter GF/90-370 of 30 Nov 90 and GF/91-171 of 16 Apr 91)
8. Election of Officers – Chairman and Vice-Chairman
9. Clarification of the Rules of Procedure regarding the “seconding” of all motions (GC Working Paper 91/1)

Commission Proposals

10. Status of Proposals (Circular Letter 91/65)
11. Conservation and Enforcement Measures (STACTIC Working Group Reports, FC Doc. 91/1 and 91/2, FC Doc. 90/8, FC Working Paper 91/1)

International Control

12. Annual Return of Infringements
13. Fishing Vessel Registration
14. Report of STACTIC

Conservation

15. Transfer of quotas between Member States (Request by Denmark on behalf of Faroes and Greenland - FC Doc. 90/2, FC Doc. 90/12-item 115, FC Doc. 91/3)

16. Summary of scientific advice by the Scientific Council (The stock summary sheets and the detailed assessments in the report of the June 1991 meeting of the Scientific Council-SCS Doc. 91/19)
 17. Management measures for fish stocks in the Regulatory Area
 - a) Cod in Div. 3M
 - b) Redfish in Div. 3M
 - c) American plaice in Div. 3M
 18. Management measures for fish stocks overlapping national fishing limits
 - a) Cod in Div. 3NO
 - b) Redfish in Div. 3LN
 - c) American plaice in Div. 3LNO
 - d) Yellowtail flounder in Div. 3LNO
 - e) Witch flounder in Div. 3NO
 - f) Capelin in Div. 3NO
 - g) Squid (*Illex*) in Subareas 3 and 4
 - h) Management measures for the following stocks, if available in the Regulatory Area, in 1991:
Cod in Div. 3L
 19. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 1993
- Adjournment**
20. Time and Place of Next Meeting
 21. Other Business
 22. Adjournment

Annex 3. Statement by Canadian Representative on Effective International Control

Mme Chair. The Canadian delegation would like to take this opportunity, as we introduce discussion on international control, to comment on the grave problems that are facing NAFO, as an institution and as a practical fisheries management organization, as we begin the 13th Annual Meeting.

I will be drawing largely from remarks made by the Minister of Fisheries and Oceans for Canada, the Honourable John C. Crosbie in La Toja, Spain at a Ministerial conference earlier this week.

At the 1988 annual meeting, Canada described NAFO as an organization in crisis. TACs have been severely overfished, stocks were declining, and fishermen from many Contracting Parties were paying the price. NAFO was at a crossroads Canada said – it was up to NAFO Members to make the right choices.

Since then, NAFO has failed to prevent overfishing and severe stock declines have resulted. Misreporting by fleets from Contracting States and lack of reporting by non-NAFO fleets ... many operating under flags of convenience ... has become so significant that scientists are losing the ability to carry out proper stock assessments. Quotas fixed by NAFO are subject to an objection procedure under which any state can simply set higher unilateral quotas and profit from the forbearance of others.

But the most damaging factor of all is the lack of effective control over fleets fishing in the NAFO Regulatory Area ... In the absence of control by a Contracting State over its fleet, quotas NAFO sets for that Contracting Party ... or even unilateral quotas the Contracting Party sets for itself ... become meaningless. Add to this a significant and growing fleet of vessels re-flagged to avoid all controls. All of this has resulted in biomass and abundance levels for most NAFO-managed stocks that are the lowest ever recorded.

For example, the advice from the NAFO Scientific Council for the Total Allowable Catch of Southern Grand Banks (3NO) cod in 1992 is 13 600 tons down from 40 000 tons in 1988 ... for Grand Banks (3LNO) American plaice, the advice is for a TAC of 25 000 tons in 1992, down from 55 000 tons, in 1986 and for Grand Banks (3LN) redfish the recommended TAC is 14 000 tons, down from 25 000 tons in 1990.

Collectively, NAFO Contracting Parties face a choice for the 1990's. We can suffer continuing declines in the state of straddling stocks, with lower quotas and diminishing catch rates. Or we can achieve rebuilt fish stocks, higher quotas and healthy catch rates. Amazingly, we seem to be heading for depletion rather than abundance and continued decline rather than a more secure future.

How do we deal with this situation? In spite of strong representatives from many quarters to take more radical action, Canada is still seeking to make NAFO work as it was intended to work. To achieve this, three things are needed on the part of all NAFO Contracting States.

First, we must approach these issues from the perspective of sustainable development ... in the words of the Brundtland Commission "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs".

Second, if NAFO is to succeed, its decisions must be accepted and it must be reinforced as an institution. In order to achieve common benefits sustainable over the long term, all states must yield some of their freedom of action to a responsible international institution such as NAFO.

Third, even if we do these things but we fail to take the practical measures, individually and jointly through NAFO, to effectively control our fleets, then overfishing and stock depletion will continue.

Proposals discussed over the past year include maintaining patrol vessels in the NAFO Regulatory Area for the whole period while fleets are fishing, a hail system involving catch reports and integration of aerial surveillance. We need to act on these, as well as to develop new measures under NAFO, like a licensing scheme, observers and electronic tracking, that should prove more effective and, potentially, less expensive. While many technical and practical elements need to be worked out, I am confident that by acting together we can succeed in exerting effective international control over fleets operating in the NAFO Regulatory Area.

As Fisheries Managers, we have a collective responsibility ... and a collective self interest ... that needs to be urgently addressed. We must act together to achieve more effective and ecologically responsible international fisheries management. That is key to achieving a prosperous fishery, sustainable for the long term, as we approach the 21st century. Since 1977, we have learned to manage the fishery within our own respective zones. We must now apply what we have learned in our own zones in international waters.

That is Canada's objective at this meeting, Mme Chair, to make NAFO an effective international organization.

Annex 4. Hail System

Proposed Amendments to Part III, Section E(1) of the Conservation and Enforcement Measures*

A Contracting Party shall ensure that vessels of that Party to which the Scheme of Joint International Inspection and Surveillance applies shall report to their competent authorities:

- a) each entry into the Regulatory Area. This report shall be made at least six (6) hours in advance of the vessel's entry and shall include the date, the time and geographical position of the vessel.
- b) each exit from the Regulatory Area **and except as provided in (c)**, each movement from one NAFO division to another NAFO division. This report shall be made prior to the vessel's exit from the Regulatory Area or entry into a NAFO division and shall include the date, time and geographical position of the vessel.
- c) When vessels conduct a fishery between Divisions 3L and 3N, and 3N and 3O which necessitates crossing the line between the divisions more than once during a period of twenty-four (24) consecutive hours, and provided that they remain within ten (10) miles of the line between the divisions the vessels concerned shall not report each change of division but shall instead report when first crossing the line between the divisions, and at intervals not exceeding twenty-four (24) hours thereafter, the date, the time and their geographical position. When such vessels leave the delimited area of 10 miles either side of the line between the divisions concerned, they shall again report the date, the time and their geographical position.

Without prejudice to Schedule II of Part V of the NAFO Conservation and Enforcement Measures, after each radio or fax transmission of information to the competent authorities of Contracting Parties the following details are to be immediately entered in the logbook:

- ◇ Date and time of transmission
- ◇ In cases of radio transmissions, name of radio station through which the transmission is made.

* FC Doc. 91/9

Annex 5. Quota Table for 1992.

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 1992 of particular stocks in Subareas 3 and 4 of the NAFO Convention Area. The values listed include quantities to be taken both inside and outside the 200-mile fisheries zone, where applicable.

Contracting Party	Cod		Redfish		American plaice		Yellowtail	Witch	Capelin	Squid (Illex) ²
	Div. 3M	Div. 3NO	Div. 3M	Div. 3LN	Div. 3M	Div. 3LNO	Div. 3LNO	Div. 3NO	Div. 3NO	Subareas 3+4
1. Bulgaria	-	-	645	-	-	-	-	-	-	500
2. Canada	100	6 484	1 075	5 964	150	25 425	6 825	3 000	800	N.S. ⁴
3. Cuba	480	-	3 762	1 372	-	-	-	-	750	2 250
4. Denmark (Faroe Islands and Greenland)	2 900	-	-	-	-	-	-	-	-	-
5. European Economic Community	6 465	5 016	6 665	476	350	328	140	-	750	N.S. ⁴
6. Iceland	-	-	-	-	-	-	-	-	-	-
7. Japan	-	-	860	-	-	-	-	-	2 800	2 250
8. Norway	1 200	-	-	-	-	-	-	-	9 000	-
9. Poland	500	-	-	-	-	-	-	-	900	1 000
10. USSR	1 270	1 624	29 777	6 104	1 000	-	-	1 950	15 000	5 000
11. Others	50	476	216	84	500	47	35	50	-	5 000
12. Special Reservation ¹	-	-	-	-	-	-	-	-	-	-
Total Allowable Catch	12 965	13 600	43 000	14 000	2 000	25 800	7 000	5 000	30 000	150 000 ⁵

¹ There are no Special Reservations for 1992.

² The opening date for the squid (Illex) fishery is 1 July.

³ Any quota listed for squid may be increased by a transfer from any "coastal state" as defined in Article 1, paragraph 3 of the NAFO Convention, provided that the TAC for squid is not exceeded. Transfers made to Contracting Parties conducting fisheries for squid in the Regulatory Area shall be reported to the Executive Secretary, and the report shall be made as promptly as possible.

⁴ Not specified because the allocation to these Contracting Parties are as yet undetermined, although their sum shall not exceed the difference between the total of allocations to other Contracting Parties and the TAC.

⁵ The TAC would remain at 150 000 tons subject to adjustment where warranted by scientific advice.

Annex 6. Fisheries Commission's Request for Scientific Advice on Management in 1993 of Certain Stocks in Subareas 3 and 4*

1. The Fisheries Commission with the concurrence of the Coastal State as regards the stocks below which occur within its jurisdiction, requests that the Scientific Council, at a meeting in advance of the 1992 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 1993:

Cod (Div. 3NO; Div. 3M)
 Redfish (Div. 3LN; Div. 3M)
 American plaice (Div. 3LNO; Div. 3M)
 Witch flounder (Div. 3NO)
 Yellowtail flounder (Div. 3LNO)
 Capelin (Div. 3NO)
 Squid (Subareas 3 and 4)

2. The Commission and the Coastal State request the Scientific Council to consider the following options in assessing and projecting future stock levels for those stocks listed above:

- a) For those stocks subject to analytical dynamic-pool type assessments, the status of the stock should be reviewed and management options evaluated in terms of their implications for fishable stock size in both the short and long term. In those cases where present spawning stock size is a matter of scientific concern in relation to the continuing productive potential of the stock, management options should be evaluated in relation to spawning stock size. As general reference points the implications of fishing at $F_{0.1}$, F_{1990} and F_{max} in 1993 and subsequent years should be evaluated. The present stock size and spawning stock size should be described in relation to those observed historically and those expected in the longer term under this range of options.

Opinions of the Scientific council should be expressed in regard to stock size, spawning stock sizes, recruitment prospects, catch rates and TACs implied by these management strategies for 1993 and the long term. Values of F corresponding to the reference points should be given and their accuracy assessed.

- b) For those stocks subject to general production-type assessments, the time series of data should be updated, the status of the stock should be reviewed and management options evaluated in the way described above to the extent possible. In this case, the general reference points should be the level of fishing effort or fishing mortality (F) which is calculated to be required to take the MSY catch in the long term and two-thirds of that effort level.
- c) For those resources of which only general biological and/or catch data are available, no standard criteria on which to base advice can be established. The evidence of stock status should, however, be weighed against a strategy of optimum yield management and maintenance of stock biomass at levels of about two-thirds of the virgin stock.
- d) Spawning stock biomass levels that might be considered necessary for maintenance of sustained recruitment should be recommended for each stock.

* FC Doc. 91/10

- e) Presentation of the result should include the following:
- i) for stocks for which analytical dynamic-pool type assessments are possible:
 - ◇ a graph of yield and fishing mortality for at least the past 10 years.
 - ◇ a graph of spawning stock biomass and recruitment levels for at least the past 10 years.
 - ◇ a graph of catch options for the year 1993 over a range of fishing mortality rates (F) at least from $F_{0.1}$ to F_{max} .
 - ◇ a graph showing spawning stock biomass at 1.1.1994 corresponding to each catch option.
 - ◇ graphs showing the yield-per-recruit and spawning stock per-recruit values for a range of fishing mortality.
 - ii) for stocks for which advice is based on general production models, the relevant graph of production on fishing mortality rate or fishing effort.

In all cases the three reference points, actual F, F_{max} and $F_{0.1}$ should be shown.

3. The Fisheries Commission with the concurrence of the Coastal State requests that the Scientific Council continue to provide information, if available, on the stock separation in Div. 2J+3KL and the proportion of the biomass of the cod stock in Div. 3L in the Regulatory Area and a projection if possible of the proportion likely to be available in the Regulatory Area in future years. Information is also requested on the age composition of that portion of the stock occurring in the Regulatory Area.
4. The Scientific Council should analyze the various technical measures which could permit the elimination of massive catches of juvenile flatfishes in the NAFO area. This should cover the implementation of minimum legal sizes and the introduction of a single basic mesh size. Special attention should be paid to multispecies analyses and especially technical interactions.
5. With respect to cod in Div. 3M, the Scientific Council is requested to provide advice on means of improving the utilization (yield-per-recruit) of the resource.
6. With respect to redfish in Div. 3M, the Scientific Council is requested to provide advice on means of reducing the harvest of juvenile fish, including such factors as seasonality of fishing.
7. With respect to squid in SA 3 and 4, the Scientific Council is asked to examine all data available to it and if possible to present options for the management of the stock that are based on the NAFO principles of optimum utilization and conservation. The Council is asked also to provide information on the distribution throughout the year of the stock and on the factors that determine whether the resource becomes available within the NAFO area.
8. With respect to capelin in Div. 3NO, the Scientific Council is requested to advise on the most rational level of management, on the basis of the main principles of NAFO: optimum utilization and conservation of stocks. The Council should evaluate the importance of capelin at different

stages of their life history to the marine ecosystem and in particular, given the mass mortality following spawning, the significance of a management option that refers to harvesting during the period immediately prior to spawning. Management options such as maintaining minimum spawning biomass, a 10% and a 20% exploitation rate should be evaluated in terms of both maintaining stock size and the impact on the ecosystem.

9. The Scientific Council is asked to review further the question of a standard 130 mm mesh size for otter trawling in the Regulatory Area, and particularly to consider the species for which derogation would be required. The Council is asked to include consideration of area and season in this review, to advise on appropriate mesh sizes for fisheries for which the 130 mm would be too large, to advise on appropriate by catch limits for other species (in aggregate or individually) in fisheries using small mesh sizes and to report on any interactions between the various fisheries.
10. The Scientific Council is asked to consider the question of a minimum fish size for cod in the different parts of the Regulatory Area, both in terms of the current regulation of mesh size in otter trawls and in terms of increasing yield per recruit.

PART III

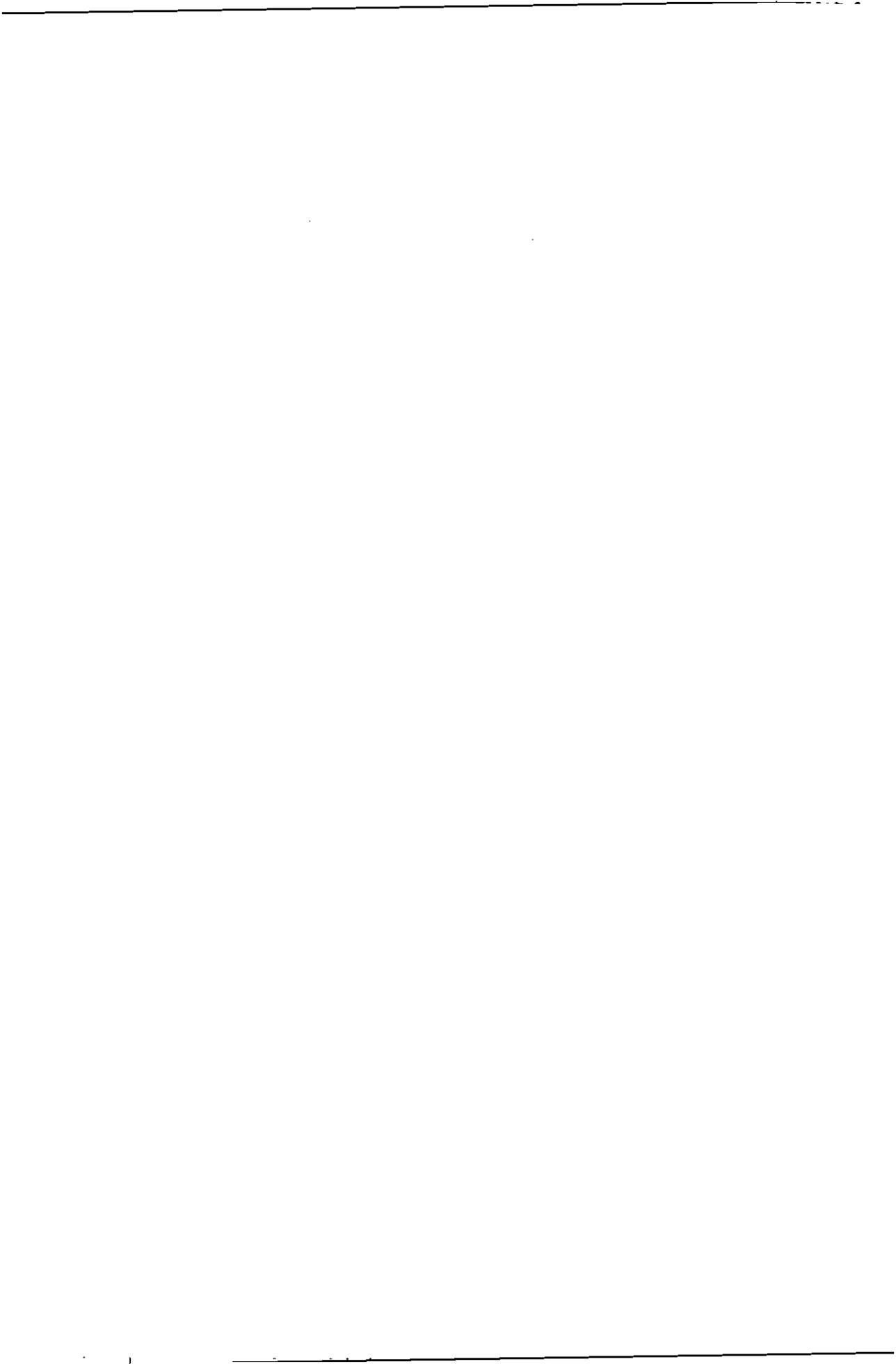
(pages 97 – 145)

Activities of the Scientific Council in 1991

List of Meetings

The following meetings were held under the authority of the Scientific Council in 1991:

- ◇ Scientific Council Meeting; 5-19 June 1991; NAFO Headquarters, Dartmouth, Nova Scotia, Canada
- ◇ Symposium on "Changes in Abundance and Biology of Cod Stocks and Their Possible Causes", 4-6 September 1991; NAFO Headquarters, Dartmouth, Nova Scotia, Canada.
- ◇ Scientific Council Meeting, Annual Meeting; 9-13 September 1991; Holiday Inn, Dartmouth, Nova Scotia, Canada.



Scientific Council Meeting 5-19 June 1991

The Scientific Council met at NAFO Headquarters at 192 Wyse Road, Dartmouth, Nova Scotia, Canada from 5 to 19 June 1991. Full Proceedings of this Meeting are published in Scientific Council Reports, 1991.

Representatives attended from: Canada, Denmark (in respect of the Faroe Islands and Greenland), European Economic Community (EEC), Iceland, Japan and the Union of Soviet Socialist Republics (USSR) (Annex 1).

The Chairman of the Scientific Council was B. Jones (EEC) and the Rapporteur T. Amaratunga, Assistant Executive Secretary.

The Agenda was adopted as in Annex 2.

FISHERY SCIENCE

General Fishery Trends

The Council noted that provisional nominal catch data for 1990 were not available for EEC-France (Metropolitan) and France (St. Pierre and Miquelon). The following general trends were noted in the absence of those data.

From provisional statistics for 1989 and 1990 the nominal catch of all fish and invertebrate species in the Northwest Atlantic (Subareas 0 to 6) increased (5%) from 2.98 million tons in 1989 to 3.13 million tons in 1990, although the "groundfish" catch decreased (8%) from 1.18 million tons in 1989 to 1.09 million tons in 1990, the "pelagic fish" catch increased significantly (16%) from 628 000 to 728 000 tons in 1990, the "other finfish" increased very substantially (41%) to 270 000 tons from 191 000 tons in 1989, and "invertebrates" catches increased (6%) from 982 000 to 1.04 million tons in 1990. With respect to nominal catches by Subarea, increases were noted for Subarea 0 (from 13 000 tons in 1989 to 19 000 tons in 1990), Subarea 3 (from 601 000 tons in 1989 to 644 000 tons in 1990), Subarea 5 (from 398 000 tons in 1989 to 476 000 tons in 1990), Subarea 6 (from 894 000 tons in 1989 to 965 000 tons in 1990) and decreases were noted for Subarea 1 (from 173 000 tons in 1989 to 139 000 tons in 1990), Subarea 2 (from 104 000 tons in 1989 to 102 000 tons in 1990) and Subarea 4 (from 796 000 tons in 1989 to 784 000 tons in 1990).

Assessment of Finfish and Invertebrate Stocks

The Council noted that STACFIS reviewed the status of certain stocks in Subareas 0 to 4, as requested by Canada, Denmark (Greenland) and the Fisheries Commission, and had advised on catch levels corresponding to reference levels of various fishing mortality options according to the different requests. Management advice, based on the reference levels, could not be provided for several stocks due to insufficient data. The following are abbreviations of the Summary Sheets of assessments presented.

For Capelin in Division 3L, STACFIS deferred discussion until the September 1991 meeting.

Cod in Subarea 1

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	Various options (see special comments)							
Agreed TAC	68.5	28.3	12.5	12.5	53	90	110	90
Reported landings	33	15	7	13		59	105 ¹	60 ¹
Non-reported catches					3	3		
Actual landings								

Provisional.

Recruitment: The year-classes 1986 to 1990 are all estimated to be poor.

State of Stock: The stock is presently dominated by the 1985 year-class which is believed to have a strong component of Icelandic origin. In 1991 it may therefore undertake a significant emigration as the 1984 year-class did in 1990.

Forecast for 1991: Yield-per-recruit considerations and assuming year-class sizes of 20 million as have conventionally been applied to poor year-classes, annual catches of 9 000 tons are indicated. However, because some cod of the 1985 year-class are still available, catches in 1991 and 1992 are expected to exceed this level.

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation:

Special Comments: Since 1982 no specific TACs have been advised, but a number of management options to let the 1984 year-class grow up before exploitation, have been advised. However, emigration of this year-class has been more extensive than assumed.

Cod in Division 3M

Year	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	0	0	0	0	0	0	0	0
Agreed TAC	13	13	13	13	0	0	0	13
Nominal catch	13	14	15	11	2	1 ¹	2 ¹	
Non-reported catches						39	30	

¹Provisional.

Recruitment: 1986 year-class is abundant.

State of Stock: Spawning stock biomass in 1990 was at the lowest limit of its critical size range.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: If cessation of fishing cannot be achieved, no action can be advised that would result in an improvement of the stock.

Special Comments: Catch, effort and sampling data of the fleets fishing for cod on the Flemish Cap should be collected and made available to STACFIS.

Cod in Divisions 3N and 3O

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	26	33	33	33	40	25	18.6	13.6
Agreed TAC	26	33	33	33	40	25	18.6	13.6
Reported catches	27	37	51	42	43	33 ¹	18 ¹	
Total landings	27	37	51	42	43	33 ¹	29 ¹	
Non-reported catches							11	

¹Provisional.

Recruitment: RV surveys indicate that the 1983 to 1987 year-classes are extremely weak. There are indications that the 1988 year-class may be larger.

State of Stock: The SPA, calibrated with RV indices and as an approximate estimate of stock size, indicates that the stock is at an extremely low level. Although catch rate indices are not used for calibration they indicate similar trends.

Forecast for 1992: Because of uncertainties with the results of the assessment it was considered inappropriate to conduct formal catch projections.

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: This stock is currently at a low level. The approximate SPA and available abundance indices indicate that the adult population is declining and several year-classes in the most recent period are among the lowest observed. Given the current state of the stock, the catch for 1992 should not exceed the 1991 TAC of 13 600 tons.

Special Comments: Preliminary 1991 Canadian RV results indicated that biomass continued to decline while abundance increased marginally. This suggested the presence of relatively more younger cod in the 1991 survey than in 1990, although total abundance remained low. Maintaining the TAC at the relatively low level of 13 600 tons may allow recruiting year-classes to contribute additional yield-per-recruit and eventually increase spawning stock biomass.

Redfish in Subarea 1

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC				No TAC				
Agreed TAC		11.5	18	19	19	19	19	19
Actual landings	6	4	5	1	1	1 ¹	0.5 ¹	

¹Provisional.

Recruitment: No direct estimates but information from surveys on nursery grounds off West Greenland.

State of Stock: Survey estimates indicate considerable decline of stock biomass and abundance in recent years.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: As long as catches remain limited to by-catches of the fisheries directed to other species, no TAC is advised.

Special Comments: The removal of large amounts of juvenile redfish by the shrimp fishery may adversely affect redfish recruitment.

Redfish in Division 3M

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	20	20	20	20	20	20	<50	43
Agreed TAC	20	20	20	20	20	20	50	50
Actual landings	20	20	29	44	23	58 ^{1,2}	83 ^{1,2}	

¹Provisional.

²Includes estimates of non-reported catch.

Recruitment: No estimate available.

State of Stock: Appears to be declining in recent years, based on both commercial catch rates and survey data.

Forecast for 1991: Fishing mortality in 1991 expected to be about same as that in 1990.

Option Basis	Predicted catch (1992)*	Predicted SSB (1.1.1993)
$F_{0.1} = .11$	35 000	
$F_{90} =$	No information available	
$F_{max} = 20$	60 000	

* Based on $F_{0.1}$ and F_{max} exploitation of the 1989-90 average total biomass estimate from USSR trawl-acoustic surveys.

Recommendation: TAC for 1992 be set at 35 000 tons.

Special Comments: This stock cannot sustain fishing mortality (above F_{max}) thought generated by the 1990 catch. Unless catches are reduced there is danger of a long-term depression of the resource.

Redfish in Divisions 3L and 3N

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	25	25	25	25	25	25	25	14
Agreed TAC	25	25	25	25	25	25	25	14
Actual landings	15	21	43	78 ¹	53 ¹	34 ^{1,2}	29 ^{1,2}	

¹Includes STACFIS estimates for non-members who do not report to NAFO.

²Provisional.

Recruitment: No estimate available but appears poor in Div. 3L. In Div. 3N a pulse first appeared in 1989 but the strength of this cannot be evaluated.

State of Stock: Difficult to determine because of possible movement of fish between Div. 3N and Div. 3O.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No Information available	
$F_{max} =$		

Recommendation: TAC for 1992 be 14 000 tons.

Special Comments: Possible migratory interactions with Div. 3O, may be the cause of the changes seen in the estimates of total biomass from USSR-trawl acoustic surveys between years.

Silver hake in Divisions 4V, 4W and 4X

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	100	100	100	100	167	235	—	100
Agreed TAC	100	100	100	100	120	135	135	100
Actual landings	74	75	83	62	74	91 ¹	69 ¹	

¹ Provisional.

Recruitment: Recruitment prospects are good, with the size of the 1990 year-class estimated from the juvenile survey similar to that of the strong 1988 year-class. The 1989 year-class is moderate and similar in size to the 1987 year-class. 1988 year-class set at 1.75 billion at age 1 for projections.

State of Stock: The standardized commercial catch rates show a general increase over the period 1980-89, although the value for 1982 appears anomalously high. In 1990 however, the catch rate dropped steeply to a level similar to that of 1983. The 1989 catch rate remained the highest since 1977. Population biomass estimates from the Canadian July RV vessel surveys show a decline from 1984 to 1989 with a slight increase in 1990.

Forecast for 1991: Catch in 1991 is expected to be 66 000 tons based on non-Canadian allocations.

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} = .72$	105 000	
$F_{90} =$		
$F_{max} =$		

Recommendation: TAC for 1992 be set at 105 000 tons based on projection at $F_{0.1}$.

Special Comments: STACFIS **recommended** that the entire issue of how to best assess this stock be revisited. This should include further studies of the ADAPT formulation as well as further development of useful indices for ages 1 and 2. In this context, the continuation of the joint Canada-USSR juvenile research vessel surveys is encouraged. STACFIS **recommended** that upon completion of the radio-nucleotide studies, one comprehensive document be prepared by Canadian and USSR authors.

American plaice in Division 3M

Year	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	2	2	2	2	2	2	2	2
Agreed TAC	2	2	2	2	2	2	2	2
Actual landings	1.3	1.7	3.8	5.6	2.8	3.5 ¹	1 ¹	

¹Provisional.

Recruitment: 1986 year-class is strong based on information from EEC surveys (1988-90).

State of Stock: Appears to be relatively stable around 10 000 tons based on estimates from EEC surveys.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{\infty} =$	No information available	
$F_{max} =$		

Recommendation: A TAC of 2 000 tons is advised which approximates to the $F_{0.1}$ level based on EEC survey estimates.

Special Comments: STACFIS noted the necessity of more information on stock age composition in order to facilitate a more thorough evaluation of this stock. It is recommended that age composition of surveys and commercial catches be presented at the June 1992 Meeting.

American plaice in Divisions 3L, 3N and 3O

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	55	49	55	48	28	30.3	24.9	25.8
Agreed TAC	55	49	55	48	40 ¹	30.3	24.9	25.8
Reported landings	37.6	49.5	60.3	55.0	41.4	40.5 ²	23.9 ²	
Non-reported catches	1.8	4.7	4.3	0	0.1	3.1	8.1	

¹Effective TAC was 33 585 tons.

²Provisional.

Recruitment: From RV surveys, recruitment of year-classes of the late-1970s and early-1980s was well below the levels of the year-classes of the late-1960s and early-1970s. The 1985 and 1986 year-classes appear to be larger than average.

State of Stock: The stock is at a relatively low level. RV surveys indicate a continuing but variable decline while Canadian catch rates indicate stability from 1986-90 at a relatively low level. Improved recruitment from the 1985 and 1986 year-classes.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1}$ =		
F_{90} =	No information available	
F_{max} =		

Recommendation: Catches for 1992 should not exceed current TAC of 25 800 tons.

Special Comments: Continuation of the catches above the TACs, coupled with increased targeting of the fisheries in the Regulatory Area on young fish, will reduce the potential benefits of improved recruitment.

Witch flounder in Divisions 3N and 3O

	Year (Weights '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	5	5	5	5	5	5	5	5
Agreed TAC	5	5	5	5	5	5	5	5
Actual landings	3	9	9	8	6	4 ¹	4 ¹	
¹ Provisional.								
<u>Recruitment:</u>	Unknown.							
<u>State of Stock:</u>	Stock size could not be firmly established, however, it appears it may have declined in recent years.							
<u>Forecast for 1991:</u>								
Option Basis	Predicted catch (1992)			Predicted SSB (1.1.1993)				
$F_{0.1} =$								
$F_{90} =$	No information available							
$F_{max} =$								
<u>Recommendation:</u>	TAC of 5 000 tons should remain in effect.							
<u>Special Comments:</u>	More detailed information from the commercial fishery is required to properly evaluate this resource. RV surveys do not cover the total area of distribution.							

Yellowtail flounder in Divisions 3L, 3N and 3O

	Years (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	17	15	15	15	15	5	5	7
Agreed TAC	17	15	15	15	15	5	5	7
Reported catches	14.9	24.0	24.5	16.3	16.2	9.1	8.9	
Non-reported catches	1.8	5.0	5.7	0	0.1	1.1	5.1	
Total landings	16.7	29.0	30.2	16.3	16.3	10.2 ¹	14.0 ¹	

Sp. stock biomass

Recruitment (age)

No information available

Mean F

¹Provisional.

Recruitment: The 1984-86 year-classes appeared to be stronger than the 3 preceding weak year-classes.

State of Stock: The stock is still at a low level, however, there is improved recruitment from the 1984-86 year-classes.

Forecast for 1991:

Option Basis

Predicted catch (1992)

Predicted SSB (1.1.1993)

F_{0.1} =F₉₀ =

No information available

F_{max} =

Recommendation: 7 000 tons TAC advised for entire stock.

Special Comments: STACFIS again expressed concern about the removals of large quantities of juvenile yellowtail in the Regulatory Area, particularly as it appears that small mesh gear is being used in some yellowtail flounder directed fisheries. Although impossible to quantify, it was noted that continuation of the current exploitation pattern in these fisheries would result in a substantial decline in yield-per-recruit.

STACFIS noted that catches in the Regulatory Area increased from 1988 to 1990 and re-emphasized that this fishery will be impossible to manage if unregulated catches by non-member countries increase from the low levels of 1987-88 to the levels estimated in 1985-86.

Greenland halibut in Subareas 0 and 1

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	25	25	25	25	25	25	25	25
Agreed TAC								
Reported landings	7	10	9	10	10	9 ¹	19 ¹	
Actual landings								

¹Provisional.Recruitment: No information available.State of Stock: Only a part of the inshore component in Subarea 1 is fully exploited.Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1}$ =		
F_{90} =	No information available	
F_{max} =		

Recommendation: TAC be maintained at a level of 25 000 tons.Special Comments: Any expansion of the fishery should be directed towards the offshore areas. There appears to be no biological reason to maintain separate assessments for the stocks in Subareas 0+1 and 2+3, however, at present, there are practical difficulties which preclude a combined assessment.

Greenland halibut in Subarea 2 and Divisions 3K and 3L

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	55 ¹	75	100	100	100	100	50	50
Agreed TAC	55	75	100	100	100	100	50	50
Reported landings	25	19	16	31	19	19 ²	29 ²	
Non-reported catches							18	

¹TAC for Div. 2J+3KL only.

² Provisional.

Recruitment: The 1984, 1985 and 1986 year-classes appear good and should contribute significantly to the fishery in forthcoming years.

State of Stock: Stock biomass within the survey area estimated to be relatively stable currently at a level of about half that estimated in mid-1980s. Stock abundance within the survey area at relatively high level due to improved recruitment.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
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$F_{0.1} =$

$F_{90} =$

$F_{max} =$

No information available

Recommendation: A TAC of 50 000 tons would approximate fishing at $F_{0.1}$. This TAC should apply to the entire stock, including the fishery in the Regulatory Area in Div. 3LM.

Special Comments: Little is known of the population in the Div. 3LM area, but STACFIS concluded that these fish are part of the SA 2 and Div. 3KL stock.

There appears to be no biological reason to maintain separate assessments for the stocks in SA 0+1 and 2+3, however, at present, there are practical difficulties which preclude a combined assessment.

Roundnose grenadier in Subareas 0 and 1

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	8	8	8	8	8	8	8	
Agreed TAC	8	8	8	8	8	8	8	
Actual landings	0.05	0.06	0.09	0.38	0.52	0.05 ¹	0.15 ¹	

¹Provisional.Recruitment: No estimate available.State of Stock: Not possible to evaluate. RV surveys by Japan and Greenland in 1987 and 1988 resulted in biomass estimates of about 45 000 tons. The 1989 estimate of 5 900 tons and the two estimates of 7 000 tons and 20 300 tons in 1990 were not considered to be realistic.Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: TAC for 1992 remain at 8 000 tons.Special Comments:

Roundnose grenadier in Subareas 2 and 3

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	11	11	11	11	11	11	11	11
Agreed TAC	11	11	11	11	11	11	11	11
Actual landings	4	5	7	8	6	5 ¹	4 ¹	

¹Provisional.

Recruitment: No estimate available.

State of Stock: Not possible to evaluate.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1}$ =		
F_{90} =	No information available	
F_{max} =		

Recommendation: TAC for 1992 remain at the precautionary level of 11 000 tons.

Special Comments: It is not anticipated that data necessary to provide more meaningful advice will be available in the near future.

Capelin in Divisions 3N and 3O

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	0	0	0	10	10	28	30	30
Agreed TAC	0	0	0	10	15	28	30	30
Actual landings	0	+	0	1	7	5 ¹	21 ¹	

¹Provisional.

Recruitment: 0-group surveys do not indicate a decline in recent years.

State of Stock: Mean stock size 1981-89 was about 303 000 tons. USSR acoustic surveys during 1975-77 indicated mean biomass of 912 000 tons.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: No basis on which to change the previous advice of 30 000 tons.

Special Comments: STACFIS concluded that a conservative exploitation rate is appropriate. This is based on possibly imprecise acoustic estimates, variable projection parameters and importance of

Squid in Subareas 3 and 4

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	150	150	150	150	-	-	-	-
Agreed TAC	150	150	150	150	150	150	150	150
Actual landings	1	1	+	2	1	7 ¹	11 ¹	

¹Provisional.

Recruitment: No information available.

State of Stock: Dependent on one year-class only.

Forecast for 1991:

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
$F_{0.1} =$		
$F_{90} =$	No information available	
$F_{max} =$		

Recommendation: No advice possible

Special Comments: STACFIS was not able to provide more precise advice than it did at the 1980 meeting without up-to-date information on squid stock, especially for recruitment. No research is presently being conducted on this stock of squid.

Shrimp in Subareas 0 and 1

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
<u>Offshore SA 0+1 (south of 71°N)</u>								
Recommended TAC	29.5	36	36	36	36	44	50	50
Agreed TAC	34.9	42.1	42.1	40.1	40.1	40.1	44.9	46.2
Actual landings	35.9	42.2	44.6	46.2	43.6	51.1	52.4	
<u>Offshore SA 1 (north of 71°N)</u>								
Recommended TAC	-	-	-	-	-	-	-	2.5
Agreed TAC	-	-	-	11.6	11.5	8	6.8 ¹	6.8 ¹
Actual landings	-	4.3	11	10.7	6.7	2.5	2.1	
<u>SA 0+1 total (including inshore catches in SA 1)</u>								
Actual landings	43.4	54.0	63.1	63.8	60.5	68.1	69.6	

¹Including the area from 60°30'N to 71°N, west of 58°W.

Recommendation: TAC for 1992 not to exceed 50 000 tons (for SA 0 and offshore SA 1 south of 71°N).

Special Comments: Concern over high discard rates in SA 1.

Shrimp in Denmark Strait

	Year (Weights in '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	4.2	5	-	-	-	10	10	10
Agreed TAC ¹	5.3	6.1	7.5 ²	7.7 ²	8.7 ²	9 ²	14.1	14.5
Actual landings	6.7	8.1	11	12.2	12.6	10.7 ³	10.3 ³	
Sp. stock biomass								
Recruitment (age)	No information available.							
Mean F								

¹On Greenland side of midline only.

²Not including Greenland fishery north of 66°30'N.

³Provisional.

Recommendation:

A lower TAC is considered to be appropriate but information is not sufficient to determine an exact lower level and therefore an arbitrary reduction from 10 000 to 8 000 tons is advised.

Special Comments:

STACFIS recommended that all historical data (commercial sampling, research survey, etc.) be thoroughly analyzed in relation to hydrographic data and results made available for future assessments.

Responses to Questions by the Fisheries Commission

a) **Cod in Divisions 2J, 3K and 3L** (SCR Doc. 91/51; SCS Doc. 91/15, 16)

Estimates of the proportion of the cod biomass in Div. 3L in the Regulatory Area were updated to include the 1990 Canadian spring and autumn research vessel (RV) surveys. These results are similar to those presented previously and are as follows:

Season RV survey conducted	Years RV survey conducted	Range of proportions of biomass occurring in the Regulatory Area (1990 value in brackets)	Average proportion (%)
Winter	1985-86	23.8-26.8	25.3
Spring	1977-90	0.4-6.1 (5.6)	2.9
Autumn	1981-90	0.5-7.7 (2.9)	3.0

Results of the autumn survey conducted in all three Divisions (2J, 3K and 3L) by Canada since 1981, continued to show that the proportion of the cod in the Regulatory Area at that time of year was less than 1%, on average of the total Div. 2J+3KL biomass. The average breakdown of biomass by Division is as follows:

Division	Relative proportion of biomass (%)
2J	38
3K	33
3L	29

By assuming that the relative distribution observed between divisions during autumn was similar to that at other times of the year, it has been previously concluded that "the proportion of the entire Div. 2J+3KL cod biomass estimated to occur in the Regulatory Area is less than 10% in winter and less than 5% on average throughout the year" (NAFO Sci. Coun. Rep., 1990, p. 103). Updating these data leaves this conclusion unchanged and because the proportions of cod in the Regulatory Area in Div. 3L exhibit no annual trends, the proportions expected to occur in this area in the future would be about the same as those observed.

b) **Flounders in Divisions 3LNO**

STACFIS again noted that large numbers of juvenile flatfish were caught in the Regulatory Area in Div. 3N, although there was more uncertainty with the catch-at-age in 1990 for yellowtail flounder and American plaice because a higher proportion of the catch was comprised of estimates for which there were no sampling data. It was concluded that the effective mesh size for some fisheries in the Regulatory Area was still likely to be much smaller than the NAFO regulation mesh size, and may have been as low as 60 mm again in 1990.

STACFIS once again emphasized that the obvious way to reduce the loss in potential yield due to the harvest of small fish is to enforce the minimum mesh size regulations in the Regulatory Area. Until this is done, it is not practical to advise on measures such as closed areas or seasons.

In any case, the information required to develop advice on such measures, as requested by Scientific Council in 1989, has not been provided to date.

c) **Witch Flounder in Divisions 3NO**

STACFIS noted that catches have averaged about 5 000 tons since the TAC was placed at that level, but the TAC had been exceeded in each year from 1985 to 1988. The indices of abundance for this stock are not adequate as measures of total stock size, as surveys do not extend into the deeper areas covered by the fisheries and catch-rate data are not complete or continuous for many fleets. There was nothing in the survey data to suggest that the stock had increased, in fact there were indications to the contrary. STACFIS concluded that until the indices of abundance for this stock are improved, it will be very difficult to evaluate the effect of management strategies on stock status. It was noted that the report of the assessment of this stock contained a number of recommendations dealing with the indices of abundance.

d) **Squid in Subareas 3 and 4**

STACFIS noted that there were no new research results available at this meeting and that no research is presently being conducted on squid. Until such time as new research is initiated and results made available for evaluation by STACFIS, it will not be possible to contemplate the provision of advice on this species.

e) **Capelin in Divisions 3NO**

TACs have been advised based on 10% of the average biomass from acoustic surveys during the 1980s. A summary of the TACs and catches ('000 tons) from 1970 to 1991 is given below:

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Advised TAC	-	-	-	-	1	1	1	1	1	0	0
TAC	-	-	-	-	1	1	1	1	1	0	0
Catch	0	1	21	127	101	132	110	47	5	0	0

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Advised TAC	0	0	0	0	0	0	10	10	28	30	30
TAC	0	0	0	0	0	0	10	15	28	30	30
Catch	0	0	0	0	+	0	1	7	5 ²	2 ¹	

¹ Part of TAC for Div. 3LNO and Subdiv. 3Ps.

² Provisional.

Biomass estimates. Acoustic estimates of abundance of mature capelin measured on the spawning grounds are available since the 1970s. The 1972 estimate was derived from a Norwegian survey but the others were from USSR and Canadian surveys. Only two estimates in the 1980s exceeded 500 000 tons. In contrast, the 1972 Norwegian estimate (or range of estimates) is lower than most estimates during the 1980s and the three USSR estimates during 1975-77 are higher than other estimates. A summary of these estimates ('000 tons) is given below (top row is Norwegian/USSR and bottom row is Canadian).

1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
125-170		1 050	687	1 000	*	**	**	109	-	269	***	***	559	315	***	***	
									223	419	219	88	212	495	230	560	28

* No mature capelin found by USSR and Canadian surveys.

** No mature capelin found by USSR; mature capelin found in Canadian survey but biomass estimates considered unreliable.

*** Biomass estimate for Div. 3NO could not be separated from total Div. 3LNO estimate.

Conclusions. The recommendation for a 10% exploitation rate was first advised by ICNAF in 1979. At that time, recruitment was poor and capelin stocks were low. STACRES concluded that during periods of poor recruitment, the exploitation rate should be low to protect the spawning stock. A conservative exploitation rate of 10% was used and applied to the capelin in Div. 3LNO with the recommendation that the TAC be applied to Div. 3L only and the fishery in Div. 3NO be closed.

This 10% exploitation rate has been maintained for the Div. 3L stock since 1979 and as noted above, was applied to the Div. 3NO stock in 1988. Recruitment in the capelin stocks has been higher during the 1980s but the advice for a 10% exploitation rate has been maintained based on other considerations. These other considerations have been the importance of capelin for cod, possible imprecise acoustic estimates and the fact that projections of mature biomass are dependent on the estimates of the age-specific proportion of mature capelin and age-specific mortalities, both of which probably exhibit annual variation. While these considerations are not cited each year, they have been the reasons for recommending a conservative exploitation rate of 10% for capelin.

STACFIS noted that the recommendation of a 10% exploitation rate was not based on an analytical analysis nor was one performed for this meeting. However, the Council agreed with STACFIS and it continues to recommend a conservative exploitation rate for capelin based on the reasons outlined above. STACFIS was especially concerned about possible deleterious effects on predators that might occur due to a decline in capelin precipitated by overexploitation. The decline of capelin in the Barents Sea, and the negative effects on predator stocks due to this decline have been severe. The complex predator-prey interactions and several aspects of capelin biology including stock structure and factors affecting survival and recruitment are poorly understood in the Northwest Atlantic.

STACFIS noted that a modelling study has been initiated using the Div. 3L database. This model is a risk analysis and will examine the current methods of projecting Div. 3L biomass from acoustic surveys. Although the database for Div. 3NO capelin is not as extensive, the principles of management should be applicable to both stocks. The results of the study are expected to be available by the end of 1991 but some preliminary results might be available by the September 1991 Meeting.

Recommendations. The Council endorsed STACFIS recommendations that research be conducted in the following areas:

- i) Research on stock structure and mixing should be continued.
- ii) More research should be directed towards predator-prey interactions with the aim of incorporating the results in the advice for capelin.

- iii) Studies on reproduction capacity estimation on different stocks of capelin should be initiated. This information would be useful in determining minimum spawning stock biomass.

The possibilities of alternate management strategies should be considered. Capelin are schooling fish and bottom spawners and they spawn in a predictable area on the Southeast Shoal.

The egg beds and spawning behaviour may be disrupted by commercial fishing and alternate management techniques such as closed fishing areas and/or closed fishing seasons, alone or in conjunction with quotas, may be effective conservation measures.

Environmental Research

The Council noted that the Environmental Subcommittee of STACFIS had met on 11 June 1991 with M. Stein as Chairman. The Subcommittee had discussed a wide range of subjects including the general environmental overview of the NAFO Convention Area, and the possible implications for fish and fisheries of global warming and Greenhouse gas interactions.

The Council particularly noted the absence of observers from USA and some environmental data that they normally submit. The Council recognizing the importance of long time series of data, endorsed the recommendation requesting data usually submitted particularly on the variation in the shelf water front position from Georges Bank and Cape Hatteras and on the anticyclonic warm-core Gulf Stream rings.

Ageing Techniques

An ageing workshop will be held at St. John's, Newfoundland in early December 1991 (B. Brodie, Canada, and P. Ernst, EEC as co-convenors) at which time further work will be done on both species. Representatives from all Contracting Parties will be invited to attend.

RESEARCH COORDINATION

- a) The Council again noted with concern that the timeliness of the submission of STATLANT 21A and 21B data reports was not improving. This meant that the most recent catch and effort data were often not available for stock assessments. This also meant a severe delay in the publication of the Statistical Bulletin and of the availability of confirmed data for use by the scientists. The Council noted that other aspects of NAFO business, such as budgets, were also affected by late submissions of these data.

The Council took note that the updating of catch and effort database by the Secretariat was completed. The data going back to 1960 could be used in a summary report on the 30 year time series when disaggregated catches for EEC-France (M) and France (SP) for 1983-85 are received.

- b) The Council was pleased to note that separate catch and effort statistics for fisheries occurring in the NAFO Regulatory Area were to be requested from Contracting Parties, and that this may lead to NAFO statistics being collected on a finer geographic scale.
- c) The Council endorsed the recommendation by STACREC that a delegate from the USSR attend the Fifteenth Session of CWP at NAFO Headquarters from 8 to 14 July 1992 and noted

that in order to prepare for that meeting, the Assistant Executive Secretary was scheduled to attend the *Ad hoc* Inter-Agency Consultation meeting which precedes the 79th Statutory Meeting of ICES, in September 1991.

Biological Sampling

The Council noted that the next publication of the *Inventory of Sampling Data* would cover the period 1985-89, and would be published when outstanding information was received. The Council took note of the recommendation to try to obtain sampling data for catches of non-member countries along with the catch and effort data for those nations.

Biological Surveys

It was noted that STACREC was presented with the inventories of surveys conducted in 1990 and of surveys proposed for 1991 and early 1992.

The lists of surveys, by stock, were reviewed by STACFIS in the reports of each stock assessment. The Council agreed that the lists would be published in a SCS document and similar compilations would be made annually from updates prepared by the Designated Experts for stocks reviewed by STACFIS.

Other Matters

The Council observed that the *List of Fishing Vessels for 1989* was to have been published in 1990, but that data were still outstanding from 4 countries or components.

PUBLICATIONS

Review of Scientific Publications (Annex 3)

The Council was pleased to note that *Journal Volume 10* containing the first invitational paper was published as planned in December 1990. Volume 11 was also published as planned with the publication date of February 1991. The Council noted the single issue of the *Journal* with papers presented at the 1989 Special Session on "Changes in Biomass, Production and Species Composition of the Fish Populations in the Northwest Atlantic over the Last 30 Years and Their Possible Causes" was still in preparation, and also the next regular issue of the *Journal* would hopefully be ready for publication by late 1991.

The Council noted *Studies Number 15* was in its final stages of printing and was pleased with the rapid turn-around time in preparation of *Studies Number 16* containing 20 papers presented at the 1990 Special Session on "Management under Uncertainties Related to Biology and Assessment, with Case Studies on Some North Atlantic Fisheries", which is expected to be completed in 2-3 months.

The Council was pleased to note that the *Scientific Council Reports 1990* was published and distributed as planned in December 1990. *NAFO Statistical Bulletin* Vol. 38 was published in February 1991 in a rapid turn-around time once data were received.

Production Costs and Revenue for Scientific Council Publications

The Council noted that no significant departures from the previous years production costs and revenues were observed. The *Journal* Vol. 4 continued to attract interest and sales since June 1990 had in fact increased.

FUTURE SCIENTIFIC MEETINGS

Scientific Council Meeting in June 1992

The Council confirmed that the Scientific Council together with its Standing Committees and Subcommittee would meet during 3-17 June 1992 at NAFO Headquarters in Dartmouth, Nova Scotia, Canada.

Annual Meeting and Special Session in September 1992

The Council noted the proposed dates for the Annual Meeting were 9-18 September 1992. The Council agreed the arrangements for the Special Session of the Scientific Council titled "State-of-the-Art in Fish Stock Assessments: a Tutorial/Workshop on Calibration Methods and Their Practical Use" would be subject to the proposal from the co-conveners, which would be reviewed during the September 1991 Meeting of the Scientific Council.

Scientific Council Meeting in June 1993

The Council agreed on the tentative dates of 2-16 June 1993 for the Meeting of the Scientific Council.

NOMINATION AND ELECTION OF OFFICERS

For the office of Chairman of Scientific Council, the current Vice-Chairman, V. P. Serebryakov (USSR) was nominated and elected.

For the office of Vice-Chairman of Scientific Council, recognizing that the Vice-Chairman of the Scientific Council would become *ex officio* Chairman of STACPUB, H. Lassen (Denmark-Greenland) was nominated and elected.

For the office of Chairman of STACREC, A. M. C. Avila de Melo (EEC-Portugal) was nominated and elected.

OTHER MATTERS

STACPUB Membership

J. E. Carscadden (Canada) was appointed by the Council to fill a vacancy in STACPUB membership.

Accommodation at NAFO Headquarters

The Chairman recalled that comments had been made at last year's meeting relating to difficulties in clearly hearing speakers due to the seating arrangements of the meeting room. He reported that alternative arrangements had been considered but it had not proved possible to resolve the problem within the constraints of the existing meeting room dimensions. In addition, the Chairman noted the very cramped accommodation which was available for people working with computers or needing to hold small group meetings. The Chairman commented that it appeared unlikely that these problems could be resolved unless additional space was made available for meetings of the Scientific Council.

Annex 1. List of Participants

Scientific Council, 5-19 June 1991, Dartmouth, Nova Scotia, Canada

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Annex 2. Agenda

Scientific Council Meeting, June 1991

- I. Opening (Chairman: B. W. Jones)
 1. Appointment of rapporteur
 2. Adoption of agenda
 3. Attendance of observers
 4. Plan of work
 5. Report of proxy votes (by Executive Secretary)

- II. Fishery Science (STACFIS Chairman: D. B. Atkinson)
 1. General review of catches and fishing activity in 1990
 2. Stock assessments
 - a) Stocks within or partly within the Regulatory Area, as requested by the Fisheries Commission with the concurrence of the Coastal State:
 - ◊ Cod (Div. 3NO; Div. 3M)
 - ◊ Redfish (Div. 3LN; Div. 3M)
 - ◊ American plaice (Div. 3LNO; Div. 3M)
 - ◊ Witch flounder (Div. 3NO)
 - ◊ Yellowtail flounder (Div. 3LNO)
 - ◊ Capelin (Div. 3NO)
 - ◊ Squid (Subareas 3 and 4)
 - b) Stocks within the 200-mile fishery zone in Subareas 2, 3 and 4, as requested by Canada:
 - ◊ Greenland halibut (Subarea 2 and Div. 3KL)
 - ◊ Roundnose grenadier (Subareas 2 and 3)
 - ◊ Silver hake (Div. 4VWX)
 - ◊ Capelin (Div. 3L)
 - c) Stocks within the 200-mile fishery zone in Subarea 1 and at East Greenland, as requested by Denmark on behalf of Greenland:
 - ◊ Cod (Subarea 1)
 - ◊ Redfish (Subarea 1) (if possible, by species)
 - ◊ Northern shrimp (East Greenland)
 - ◊ *Other finfish and invertebrates* (Subarea 1)
 - d) Stocks overlapping the fishery zones in Subareas 0 and 1, as requested by Canada and by Denmark on behalf of Greenland:
 - ◊ Greenland halibut (Subareas 0 and 1)
 - ◊ Roundnose grenadier (Subareas 0 and 1)
 - ◊ *Northern shrimp* (Subareas 0 and 1)
 3. Environmental research (Subcommittee Chairman: M. Stein)
 - a) Chairman's report

- b) Marine Environmental Data Service (MEDS) Report for 1990
 - c) Review of environmental studies in 1990
 - d) Overview of environmental conditions in 1990
 - e) National representatives
 - f) Report on the Second World Climate Conference (Geneva, 29 October-7 November 1990)
 - g) Other matters
4. Ageing techniques and validation studies
- a) Report on methods of ageing silver hake otoliths
 - b) Reports on the otolith exchanges of American plaice (Div. 3LM) and Greenland halibut
 - c) Other ageing and validation studies reported
5. Gear and selectivity studies
- a) Reports on gear and selectivity studies
 - b) Proposals for gear and selectivity studies
6. Review of SCR and SCS documents not considered in items 1 to 5 above
7. Other matters
- a) Review of arrangements for conducting stock assessments and documentation of assessments
 - b) Progress report on contributions for the 4-6 September 1991 Symposium on "Changes in Abundance and Biology of Cod Stocks and Their Possible Causes", hosted by the Scientific Council (H. Hovgård, Denmark, Convener)
 - c) Reports from the co-conveners of the Special Session in 1992 and any other matters in relation to this meeting
 - d) Theme for the 1993 Special Session
 - e) Other business

III. Research Coordination (STACREC Chairman: W. B. Brodie)

1. Fishery Statistics

- a) Progress report on Secretariat activities in 1990/91
 - i) Acquisition of STATLANT 21A and 21B reports for recent years
 - ii) Publication of statistical information
 - iii) Updating of fishery statistics database
- b) Review of reporting requirements for submission of STATLANT 21A and 21B statistics

- c) Fifteenth Session of CWP, July 1992
- 2. Biological Sampling
 - a) Progress report on activities in 1990/91
 - b) Forms and deadlines for submission of data
- 3. Biological Surveys
 - a) Review of survey activity in 1990
 - b) Survey plans for 1991 and early 1992
 - c) Review of stratification schemes
 - d) Coordination of surveys in 1991-92 (if required)
- 4. Other Matters
 - a) List of fishing vessels for 1989
 - b) Tagging activities reported for 1990
 - c) Review of relevant SCR and SCS documents not considered in items 1 to 3 above
 - d) Other business

IV. Publications (STACPUB Chairman: V. P. Serebryakov)

- 1. Review of STACPUB membership
- 2. Review of scientific publications since June 1990
- 3. Production costs and revenues for Scientific Council publications
- 4. Promotion and distribution of scientific publications
 - a) Publicity and response regarding the Journal
 - b) Invitational papers for the Journal
 - c) New cover of the Journal
- 5. Editorial matters regarding scientific publications
 - a) Editorial activities
 - b) Progress review: Journal issue of 1989 Special Session
 - c) Review of general editorial process
 - d) Review of Editorial Board
- 6. Papers for possible publication
 - a) Review of proposals resulting from the 1990 meetings
 - b) Review of contributions to the 1991 meeting
- 7. Microfiche projects
 - a) Review of requests for microfiche of ICNAF documents
 - b) Question of microfiching NAFO research documents
- 8. Other matters

V. Rules of Procedures

VI. Collaboration with other Organizations

1. Joint ICES/NAFO working group on harp and hooded seals
2. Fifteenth Session of CWP, July 1992

VII. Arrangements for Special Sessions

VIII. Future Scientific Council Meetings, 1991 and 1992

IX. Nomination and election of officers to the Scientific Council and its Standing Committees (except STACFIS)

X. Other Matters

XI. Adoption of Reports

1. Committee reports from this meeting (STACFIS, STACREC, STACPUB)
2. Scientific Council Report, June 1991 (receipt and adoption)

XII. Adjournment

Symposium on Changes in Abundance and Biology of Cod Stocks and Their Possible Causes

The Symposium was held at NAFO Headquarters at 192 Wyse Road, Dartmouth, Nova Scotia, Canada on 4-6 September 1991. Full Report of this Symposium is published in Scientific Council Reports, 1991. Participants attended from: Canada, Denmark (Greenland), European Economic Community (EEC), Japan, Norway, Union of Soviet Socialist Republics (USSR) and the United States of America (USA) (Annex 1). The Chairman was H. Hovgård (Denmark-Greenland).

Case Studies

A total of six presentations provided background information on seven cod stocks occurring in the North Atlantic. Emphasis was placed on providing summaries of historical and current annual catch levels in conjunction with corresponding annual changes in stock status. Some of the possible causes for stock fluctuation were presented which included management strategies and recruitment variation. It was generally recognized that our ability to assess stock status has improved and we are potentially capable of preventing the over exploitations that have occurred in the past. It was agreed that more emphasis should be placed on understanding the processes that influence recruitment levels as well as some of the biological changes that have been observed.

The following presentations were discussed: Georges Bank cod (SCR Doc. 91/107, Cod stocks in the Newfoundland area (SCR Doc. 91/115), Baltic cod (SCR Doc. 91/97), Barents Sea (SCR Doc. 91/117), Cod in Subdivision 3Ps (SCR Doc. 91/114) and West Greenland cod (SCR Doc. 91/118).

Distribution

Five papers concerned with distribution were presented in this section.

The age specific distribution in the North Sea as inferred from autumn/winter surveys showed a gradual northern shift in distribution between age 1 to age 3+ cod (SCR Doc. 91/109). This pattern was found consistently in the period studied (1971-91). The youngest age groups were in general found in more shallow and colder waters than older cod. A series of quarterly surveys has been initiated to follow the changes in distribution relative to depth, temperature and salinity over the full course of the year.

A study in Subdiv. 4Vs and Div. 4W (SCR Doc. 91/103) showed that older cod were found at progressively greater depths over the entire age range studied (age 1-12). The temperature where most of the catch was taken was highest for age 1 cod and decreased to age 5 after which it remained stable. The depth and temperature distribution of the cod catches did not correspond with those observed in the total survey area, hence indicating that cod sought areas with specific conditions. From a management point of view it was pointed out that the depth segregation of ages enables a possible mechanism for year-class targeting in the commercial fishery.

Age specific distribution of cod in southern Gulf of St. Lawrence was analyzed with respect to depth, temperature and regions using Poisson regression models. Depth distribution was age dependent with older cod occurring at greater depths whereas distribution by area changed significantly between the 1971-78 and the 1979-90 periods with the age depth relationship being

significantly steeper in the period of high abundance. The change in areal distribution observed was not well understood as it could have been caused by density dependence, differences in migration timing, change in prey abundance or other environmental changes.

In the eastern part of the Gulf of St. Lawrence (Subdiv. 3Pn and Div. 4RS) cod have shown significant variations in depth distribution in winter surveys since 1978 (SCR Doc. 91/110). Highest survey catches were observed at bottom temperatures between 4.7° and 6.3°C. The temperature in the deeper waters fluctuated within this range whereas the temperature in more shallow water (0-180 m) showed annual variations between 2° and 4°C. Years with high catches in the shallow waters were restricted to years with high temperatures. The period since 1987 had been characterized by low temperatures and this had led to movement of the trawler fleet to deeper waters. The effect on the small boat fixed gear fleet had been very significant as it was confined to depths less than 180 m. Catches in winter had dropped from a level of 5 000 tons prior to 1987 to almost nil in 1991.

The conflict between trawlers and longliners was discussed for the Subdiv. 4Vn cod (SCR Doc. 91/109). It was concluded that the spatio-temporal distribution of the trawler fleet to the areas of the longline fishery was not affecting the longliner fleet significantly. It was of more importance that the trawlers exploited the year-classes before they become available to the longliners, hence affecting the potential yield of the latter fleet.

In the discussion following the session it was noted that factors such as depth, temperature, salinity and areal units may have confounding effects and that this poses difficulties in drawing strict conclusions on the importance of the individual factors.

Migration

A model designed to study the migration of cod, and thus its availability to the fisheries in Div. 2J+3KL was presented (SCR Doc. 91/119). The approach used was to describe the movement of cod in relation to theory based on fisheries oceanography (closed loop migration), behavioral ecology (predation) and physiological (thermal) responses. Model predictions were being tested with physical oceanography, fisheries acoustics, trawling and tagging data. Two migratory channels have been identified and the movements of cod over two years have been observed. Preliminary results indicate consistent migratory pathways, and that the movements are indicated, but not necessarily determined, by water temperature. The program was in the second of a planned five-year study.

The immigration of cod from Greenland to Iceland was estimated by examination of fishing mortalities for specific year-classes (SCR Doc. 91/102). The immigration was indicated by apparent abnormal low fishing mortalities on certain year-classes in a VPA. The extent of the immigration was estimated by re-running the VPA with fishery mortalities estimated for adjacent year-classes and taking the differences between the two estimates of year-class strength.

Growth and Feeding

Three approaches for estimating environmental effects on growth, from either growth increments or size-at-age data, were compared (SCR Doc. 91/99). The behaviour of the estimation procedures was tested using simulated data which incorporated different environmental effect levels and data errors. It was pointed out that growth increments calculated by differing size-at-age are auto-correlated and thus statistical procedures should be modified accordingly. The preferred approach was to fit von Bertalanffy curves, allowing for environmental effects either on L_{∞} or K .

Data on the stomach fullness index-at-age of Flemish Cap cod, collected in 1989 and 1990, were analyzed in relation to year-class strength (SCR Doc. 91/111). Although the data were limited, they suggested a negative correlation between gut fullness and abundance.

A paper compared estimates of daily feeding rates of Newfoundland cod obtained by three different methods (SCR Doc. 91/100). Comparable results were found with the three methods.

Closing Discussion

Two main issues were raised at the final discussion. Firstly, it was asked whether common key processes affecting growth, recruitment, distribution or migration should be expected across the different cod stocks. The second main issue was the temporal and areal scales on which such processes were acting.

It was recognized that the main emphases in the study of cod stocks varied greatly between areas. For southern stocks much effort has been allocated to multispecies studies, whereas several programs have been initiated to try to link cod biology to climatic effects for northern stocks. For some stocks still other processes are important; migrations as seen off Greenland or changes in salinity and oxygen in the Baltic Sea. Between cod stocks living in similar types of environments, ecological similarities are observed *viz.* the cod/capelin linkage for some of the northern cod stocks. However, more detailed studies indicate that the systems are not identical. Despite these differences it was concluded that attempts should be made to develop *general conceptual models applicable across the different cod stocks*. Such models need to be flexible thus allowing for varying importance of key processes to the different cod stocks.

Much of the data available relevant to the study of cod stock dynamics has been compiled for fish stock assessment purposes, thus introducing a given level of aggregation in time and space. In an assessment context, a disaggregation into small units may well increase the complexity and thereby impede interpretations. The study of biological processes may require data on a more desegregated level, as an aggregation of sub-populations characterized by differences in biology may well lead to erroneous results.

Recommendations

The papers presented should be published either in full, or as extended abstracts for papers to be published elsewhere, in a special volume of the *NAFO Scientific Council Studies*.

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Symposium on Changes in Abundance and Biology of Cod Stocks and Their Possible Cause

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Scientific Council Meeting; NAFO Annual Meeting 9-13 September 1991

The Scientific Council met at the Holiday Inn, Dartmouth, Nova Scotia, Canada, during 9-13 September 1991. Full Proceedings of this Meeting are published in Scientific Council Reports, 1991. Representatives attended from Canada, Denmark (Greenland), European Economic Community (EEC), Japan and the Union of Soviet Socialist Republics (USSR). (Annex 1)

The Chairman of the Meeting was B. Jones (EEC) and the Rapporteur was T. Amaratunga, Assistant Executive Secretary.

The Agenda was adopted as in Annex 2.

The Council also briefly met on 13 September 1991 to address further questions posed by the Fisheries Commission during this Annual Meeting. It was noted that the verbal responses conveyed by the Chairman would be reflected in the minutes of the Fisheries Commission.

Brief summaries of the Standing Committee Reports and other matters considered by the Scientific Council are given below.

FISHERY SCIENCE

Stock Assessments

The Council at the June 1991 Meeting had postponed the assessment of Div. 3L capelin because ice conditions in the area had affected the acoustic surveys. STACFIS at this meeting had received the results of subsequent surveys and the Council endorsed the assessments conducted at this meeting. A brief summary of the assessments are given in the abbreviated Summary Sheet below.

Capelin in Division 3L

Year	Year (Weights '000 tons)							
	1984	1985	1986	1987	1988	1989	1990	1991
Recommended TAC	38	60	130	283	90	335	350	— ¹
Agreed TAC	26	26	55	25	45	46	56	56
Reported landings	33	25	48	19	53	52 ²	47 ²	
Non-reported catches								
Actual landings	33	25	48	19	53	52 ²	47 ²	
Sp. stock biomass	382	596	1 300	2 830	900	3 345	3 500	
Recruitment ³ (age 2)	73.2	73.2	63.7	87.8	380.4	314.8	353.2	
Mean F	No information available							

¹ STACFIS concluded that a catch of 50,000 tons as in recent years would be well below a 10% exploitation rate.

² Provisional.

³ Recruitment at age 2 in the year shown. Recruitment 1982-85 were projections from acoustic surveys. From 1986 to present, measured directly from acoustic surveys.

<u>Catches:</u>	All catches are inshore and determined by market. The dominant market is the Japanese roe market.
<u>Stock size indicators :</u>	Acoustic surveys on recruiting year-classes and 0-group surveys. Indices of mature biomass inshore from catch rates and aerial survey.
<u>Data and Assessment:</u>	Projections from acoustic survey estimates of recruiting year-classes.
<u>Fishing Mortality:</u>	Not estimated but very low. Recommended TACs based on exploitation rate of 10%. Catches were much lower than the recommended TAC in recent years.
<u>Recruitment:</u>	Estimated from acoustic surveys. 0-group surveys indicated good recruitment for 1988 and 1989 year-classes. Most recent acoustic estimates indicate low abundance of these year-classes.
<u>State of Stock:</u>	Uncertain. Decline in 1991 acoustic estimates was unexpected given previous indicators of year-class strength.
<u>Forecast for 1992:</u>	Preliminary projections indicate a severe decline, but STACFIS was unable to identify whether the decline was indicative of stock status.

Option Basis	Predicted catch (1992)	Predicted SSB (1.1.1993)
F _{0.1} =		
F ₉₀ =	No information available	
F _{max} =		

Recommendation: Special meeting late-February or early-March 1992 to re-assess the stock.

Special Comments: The low 1991 acoustic estimates were unexpected based on previous indications of the strength of the relevant year-classes (1988 and 1989). STACFIS could not evaluate whether these low estimates were indicative of stock status and recommended a special meeting in late-February or early-March 1992 to re-assess the stock.

RESEARCH COORDINATION

Fisheries Statistics

The Council noted with concern that the situation with STATLANT 21A and 21B report submissions had not changed since the June 1991 Meeting, with several 21B reports for 1989 and 1990 outstanding and also the 21A reports for EEC-France and France-SP for 1990 still outstanding.

Review of Sampling Information

The Council agreed with the decision by STACREC that in view of the relatively few requests for these data from the Secretariat, it would be adequate for the Secretariat to receive and compile lists of sampling data, and that the publication of the *Inventory of Sampling Data* by the Secretariat was important.

FUTURE MEETING ARRANGEMENTS

June 1992 Meeting of Scientific Council

The Scientific Council together with its Standing Committees and Subcommittee would meet during 3-17 June 1992 at NAFO Headquarters in Dartmouth, Nova Scotia, Canada.

Special Session and Annual Meeting, September 1992

The Annual Meeting of the Scientific Council would be held during 14-18 September 1992. The meeting would be preceded by the Special Tutorial/Workshop at NAFO Headquarters in Dartmouth, Nova Scotia, Canada, beginning on 8 September 1992. The duration of the Tutorial/Workshop would be between 3-5 days, as determined by the conveners.

Ageing Workshop

The Council noted that the Age Determination Workshop on Greenland halibut and American plaice was scheduled to be held in St. John's, Newfoundland during 3-12 December 1991, and an announcement would be made by letter from the Secretariat.

OTHER BUSINESS

Collaboration with Other Organizations

The Council noted that on the subject of Joint ICES/NAFO Working Group on Harp and Hooded Seals, the Report of the June 1991 Meeting of the Scientific Council stated that there were no requests for a meeting to date. However, ICES had scheduled a meeting of the Working Group during its last Statutory Meeting in 1990. The NAFO Secretariat had recently received the agenda for the meeting which had been scheduled for October 1991.

Research Surveys

The Council was informed that the USSR research survey program may be reduced in 1992 because of budgetary restraints in the USSR. It was noted, however, that the USSR vessels may be available if other Contracting Parties were able to fund some surveys. The Council noted that it

depended very heavily on research vessel survey data and any reductions in the survey programs will be regrettable. The Council hoped that every effort be made to maintain, and if possible extend, the current survey coverage. Particular reference was made regarding the proposed joint EEC work with USSR on Greenland halibut for which USSR provides a vessel, and it was hoped this program will not be jeopardized.

Annex I. List of Participants

Scientific Council, 13th Annual Meeting, Dartmouth, N.S., Canada
9-13 September 1991

CANADA

- D. B. Atkinson, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1.
C. A. Bishop, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
W. B. Brodie, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
J. E. Carscadden, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
D. Miller, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
B. Nakashima, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
G. H. Winters, Dept. of Fisheries and Oceans, P. O. Box 5667, St. John's, Newfoundland A1C 5X1
D. E. Waldron, Marine Fish Division, Dept. of Fisheries and Oceans, P. O. Box 1006, Dartmouth, N.S. B2Y 4A2
J. S. Beckett, Fisheries Research Branch, Dept. of Fisheries and Oceans, 200 Kent St., Ottawa, Ontario K1A 0E6

DENMARK (in respect of Faroe Islands and Greenland)

- H. Hovgård, Greenland Fisheries Research Institute, Tagensvej 135, 2200 Copenhagen N.

EUROPEAN ECONOMIC COMMUNITY (EEC)

- A. Laurec, Directorate General for Fisheries, Commission of European Communities, Rue Joseph II/99, 1049 Brussels, Belgium
A.M.C. Avila de Melo, Instituto Nacional de Investigacao das Pescas, Av. Brasilia, 1400 Lisbon, Portugal
M. L. Godinho, Instituto Nacional de Investigacao das Pescas, Av. Brasilia, 1400 Lisbon, Portugal
P. Moguelet, IFREMER, B. P. 4240, 97500 Saint Pierre et Miquelon
P. Ernst, Institut für Hochseefischerei und Fischverarbeitung, An der Jagerback 2, 251 Rostock-Marienehe, Germany
B. W. Jones, Fisheries Laboratory, Lowestoft, Suffolk NR33 0HT, United Kingdom
G. Perez-Gandaras, Instituto de Investigaciones Marinas, Eduardo Cabello 6, Vigo, Spain
A. Vazquez, Instituto de Investigaciones Marinas, Muelle de Bouzas, Vigo, Spain

JAPAN

- Y. Uozumi, National Research Institute of Far Seas Fisheries, 5-7-1 Ordo, Shimizu 424

UNION OF SOVIET SOCIALIST REPUBLICS (USSR)

- V. A. Rikhter, AtlantNIRO, 5 Dmitry Donskoy Street, Kaliningrad, 236000
V. P. Serebryakov, VNIRO, 17 V. Krasnoselskaya, Moscow B-140, 107140
F. M. Troyanovsky, Sevrybpoisk, 7 Papaninst, Murmansk 183012

Annex 2. Agenda

Scientific Council Meeting, September 1991

- I. Opening (Chairman: B. W. Jones)
 1. Appointment of rapporteur
 2. Adoption of agenda
 3. Plan of work

- II. Fishery Science (STACFIS Chairman: D. B. Atkinson)
 1. Stock assessments
 - a) Capelin (Div. 3L) (See SCS Doc. 91/19)
 2. Report of Symposium on "Changes in Abundance and Biology of Cod Stocks and Their Possible Causes" (4-6 September 1991 with H. Hovgård as Convener)
 3. Review of current arrangements for conducting stock assessments
 - a) Updating list of Designated Experts
 - b) Status of revision of SCR Documents dealing with preliminary assessments.
 - c) Format and contents of Scientific Council Reports
 4. Future Special Sessions
 - a) Special Session in September, 1992 on "State-of-the-Art in Fish Stock Assessments: a Tutorial/Workshop on Calibration Methods and Their Practical Use"
 - b) Proposed theme for Special Session in September 1993
 5. Other matters

- III. Research Coordination (STACREC Chairman: W. B. Brodie)
 1. Acquisition of STATLANT 21A and 21B reports
 2. Publication of statistical information
 3. Review of requirements for submission of sampling information
 4. Other matters

- IV. Publications (STACPUB Chairman: V. P. Serebryakov)
 1. Review of Editorial Board
 2. Invitational papers
 3. Review of papers for possible publication
 - a) Review of proposals from past meetings
 - b) Contributions to present meeting
 - c) Other contributions

4. Other matters
- V. Review of Future Meeting Arrangements
 1. June 1992 *Meeting of the Scientific Council*
 2. Special Session and Annual Meeting, September 1992
 3. June 1993 Meeting of the Scientific Council
- VI. Other Business
- VII. Adoption of Reports
 1. Committee Reports of present meeting (STACFIS, STACREC STAC-PUB)
 2. Report of Scientific Council, September 1991
- VIII. Adjournment

Annex 3. Scientific Publications

Journal of Northwest Atlantic Fishery Science

This publication began after the ICNAF Research Bulletin which terminated with No. 14 in September 1979. Each annual volume consists of one or more numbers.

- Vol.1 - One number, 10 papers, 112 pages (Published December 1980)
- Vol.2 - One number, 10 papers, 76 pages (Published October 1981)
- Vol.3 - Two numbers, 17 papers, 180 pages (Published October 1981)
- Vol.4 - One number, special issue on early stages of marine fishes, 424 pages (Published July 1983)
- Vol.5 - Two numbers, 26 papers, 224 pages (Published January and November 1984)
- Vol.6 - Two numbers, 17 papers, 179 pages (Published June and December 1985)
- Vol.7 - Two numbers, 18 papers, 177 pages (Published December 1986 and December 1987)
- Vol.8 - One number, 7 papers, 88 pages (Published December 1988)
- Vol.9 - Two numbers, 13 papers, 159 pages (Published September 1989 and December 1989)
- Vol.10 - One number, special issue of an invited review paper, 57 pages (Published December 1990)
- Vol.11 - One number, 7 papers, 80 pages (Published February 1992)

NAFO Scientific Council Studies

This publication replaced ICNAF Special Publication, which terminated with Number 11 (revised) in August 1980, and ICNAF Selected Papers, which terminated with Number 6 in January 1980. One or more numbers are published annually.

- No. 1 - Miscellaneous papers (11), 101 pages (Published March 1981)
- No. 2 - Manual on groundfish surveys, 56 pages (Published December 1981)
- No. 3 - Miscellaneous papers (8), 82 pages (Published April 1982)
- No. 4 - Papers on remote-sensing applications to fishery science (12), 98 pages (Published September 1982)
- No. 5 - Papers on environmental conditions in 1970-79 (12), 114 pages (Published December 1982)
- No. 6 - Miscellaneous papers (8), 104 pages (Published December 1983)
- No. 7 - Miscellaneous papers (9), 98 pages (Published August 1984)
- No. 8 - Miscellaneous papers (12), 96 pages (Published April 1985)
- No. 9 - Papers on squid (17), 180 pages (Published November 1985)
- No. 10 - Miscellaneous papers (9), 112 pages (Published August 1986)
- No. 11 - Miscellaneous papers (11), 127 pages (Published March 1987)
- No. 12 - Miscellaneous papers (8), 90 pages (Published March 1988)
- No. 13 - Miscellaneous papers (5), 82 pages (Published November 1989)
- No. 14 - Miscellaneous papers (6), 74 pages (Published May 1990)
- No. 15 - Miscellaneous papers (7), 68 pages (Published May 1991)
- No. 16 - Papers (22) on Management Under Uncertainties, 190 pages (Published November 1991)

Scientific Council Reports

This publication (issued annually) replaced ICNAF Redbook which terminated with the issue in December 1979.

- 1980 - Reports of seven meetings in 1979 and 1980, 190 pages (Published December 1980)
- 1981 - Reports of four meetings in 1981, 148 pages (Published December 1981)
- 1982 - Reports of two meetings in 1982, 110 pages (Published December 1982)
- 1983 - Reports of three meetings in 1983, 152 pages (Published December 1983)
- 1984 - Reports of three meetings in 1984, 126 pages (Published December 1984)
- 1985 - Reports of three meetings in 1985, 146 pages (Published in December 1985)
- 1986 - Reports of three meetings in 1986, 156 pages (Published in December 1986)
- 1987 - Reports of three meetings in 1987, 138 pages (Published in December 1987)
- 1988 - Reports of two meetings in 1988, 150 pages (Published in December 1988)
- 1989 - Reports of two meetings in 1989, 180 pages (Published in December 1989)
- 1990 - Reports of two meetings in 1990, 188 pages (Published in December 1990)
- 1991 - Reports of two meetings in 1991, 164 pages (Published in December 1991)

NAFO Statistical Bulletin

This publication replaced ICNAF Statistical Bulletin which terminated with Vol. 28 (revised). The volume numbering continues the series.

- Vol. 29 - Fishery statistics for 1979, 290 pages (Originally published July 1981; revised edition published November 1984)
- Vol. 30 - Fishery statistics for 1980, 280 pages (Originally published August 1982; revised edition published October 1984)
- Vol. 31 - Fishery statistics for 1981, 276 pages (Originally published September 1983; revised edition published March 1985)
- Vol. 32 - Fishery statistics for 1982, 284 pages (Published December 1984)
- Vol. 33 - Fishery statistics for 1983, 280 pages (Published December 1985)
- Vol. 34 - Fishery statistics for 1984, 304 pages (Published December 1986)
- Vol. 35 - Fishery statistics for 1985, 322 pages (Published December 1987)
- Vol. 36 - Fishery statistics for 1986, 304 pages (Published October 1989)
- Vol. 37 - Fishery statistics for 1987, 295 pages (Published April 1990)
- Vol. 38 - Fishery statistics for 1988, 307 pages (Published February 1991)

NAFO List of Fishing Vessels

This triennial publication replaced ICNAF List of Fishing Vessels which terminated with the 1977 list in April 1980.

- 1980 - List for 1980, 48 pages (Published March 1983)
- 1983 - List for 1983, 43 pages (Published April 1985)
- 1986 - List for 1986, 48 pages (Published July 1988)
- 1989 - List for 1989, 44 pages (Published January 1992)

Inventory of Sampling Data

The first publication under the aegis of NAFO was published in April 1989. The "Inventory of Sampling Data 1979-84" (250 pages) was prepared in the same format as the previous ICNAF inventory.

NAFO Index of Meeting Documents

This publication contains lists of all documents along with a subject and author index of Scientific Council documents issued during a 5-year period.

- 1979-84 - 146 pages (Published March 1985)
- 1985-89 - 116 pages (Published December 1990)

PART IV

(pages 147-161)

**Administrative and Financial Report
for the Year Ended 31 December 1991**

Administrative Report for the Year Ended 31 December 1991

Meetings and Staff Activities

The Executive Secretary travelled to Ottawa in January 1991 to meet and introduce himself with authorities of the host country, and to discuss appropriate NAFO issues.

The first meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties (STACFAC) was held in the Holiday Inn, Dartmouth, 30-31 January 1991.

The Chairperson of STACFAD, D. Gill and D. Delcorde, Canada, visited the NAFO Secretariat on 15 February 1991 and discussed Staff Rules with the Executive Secretary.

The International Fisheries Commission Pension Society held its Annual Meeting in Vancouver, British Columbia from 14 to 16 May 1991. Directors of the Society and Commission representatives met to discuss the pension plan for employees in North America. The NAFO Secretariat was represented by the Executive Secretary and Messrs. Champion and Keating.

The second meeting of the Standing Committee on Fishing Activities of Non-Contracting Parties (STACFAC) was held in NAFO Headquarters, Dartmouth, 3-4 June 1991.

The Scientific Council and its Standing Committees met at NAFO Headquarters, Dartmouth, 5-19 June 1991.

The Working Group on Improvements to Inspection and Control in the Regulatory Area met at NAFO Headquarters, Dartmouth, 3-5 July 1991.

A Symposium, "Changes in Abundance and Biology of Cod Stocks and Their Possible Causes", hosted by the Scientific Council was held at NAFO Headquarters, 4-6 September 1991.

Publications

The publications listed below were typed or phototypeset and printed in the NAFO Secretariat. It is estimated that 825,000 pages of printed material will be distributed in publications and an additional 1.0 million pages of printed material distributed in documents/circular letters before the end of 1991.

- a) *NAFO Journal of Northwest Atlantic Fishery Science* – Volume 10 (62 pages) was distributed in January 1991. This volume was an invitational paper "The Delimitation of Fishing Areas in the Northwest Atlantic" by R. G. Halliday and A. T. Pinhorn.
- b) *NAFO Journal of Northwest Atlantic Fishery Science* – Volume 11 containing 7 papers (80 pages) was distributed in March 1991.
- c) *NAFO Scientific Council Studies* – Number 15 containing 7 papers (68 pages) was distributed in May 1991.
- d) *NAFO Scientific Council Studies* – Number 16 containing 21 papers (190 pages) was be distributed in December 1991.
- e) *NAFO Scientific Council Reports 1990* – (188 pages) was distributed in January 1991.

- f) *NAFO Statistical Bulletin* – Volume 38 (308 pages) was distributed in February 1991.
- g) *NAFO Index of Meeting Documents for the years 1985-89* (116 pages) was distributed in January 1991.

Research and Statistical Activities

a) **Fishery Statistics**

The statistical database at the Secretariat which is in an IBM compatible PC system, was updated back to 1960. Many Contracting Party requests for data were conveniently fulfilled and supplied in the form of diskettes.

i) **STATLANT 21B Reports for 1988**

After the late receipt of STATLANT 21B data from some countries, *NAFO Statistical Bulletin* Vol. 38 was published in February 1991 just 1 month after all data became available. Since the deadline for submission of data was 30 June 1989, this issue was significantly delayed.

ii) **STATLANT 21B Reports for 1989**

Deadline for submission of STATLANT 21B reports for 1989 was 30 June 1990. As of June 1991, data were still outstanding from 7 countries. The delay in the acquisition of final data will again have impact on the timely publication of *NAFO Statistical Bulletin* Vol. 39.

iii) **STATLANT 21B Reports for 1990**

Deadline for submission of STATLANT 21B reports for 1990 was June 1991. As of June 1991, data from only 5 countries were reported to the Secretariat.

iv) **STATLANT 21A Reports for 1990**

The deadline for the submission of provisional statistics in the STATLANT 21A reports for 1990 was 15 April 1991. This is in order to provide sufficient time for the Secretariat to tabulate the data for the June Meeting of the Scientific Council. Timely submission of these provisional data are necessary for stock assessments carried out by the Scientific Council at the June Meeting. As of June 1990, data were outstanding from 8 countries, however, necessary data were submitted during the June 1990 Meeting except for data from France and the Secretariat tabulated the available data during the meeting.

v) **Monthly Reporting of Provisional Catch Statistics**

The Secretariat continued to prepare and distribute the monthly reporting of the provisional catches for selected stocks, by the *NAFO Circular Letter* series.

There were, however, occasions when some Contracting Parties tended to neglect submissions. The most recent report was issued in *NAFO Circular Letter* 91/102.

vi) **Historical catches for 1979-89**

The Secretariat continued the practice of preparing a Summary Document (SCS Doc. 91/1, Serial No. N1868). The document contains an 11-year time series from 1979 to 1989 with mainly updates for 1979-88 and provisional data for 1989. More than 70 stocks are currently included in this list (others may be added upon request).

vii) **Biological Sampling Data**

The Secretariat continued the practice of preparing a Summary Document on Biological Sampling Data: (SCS Doc. 91/10, Serial No. N1898) containing data for 1989. The Inventory of Sampling Data for 1985-89 is due to be published this year. All outstanding data or modifications were requested to be submitted to the Secretariat at or before the September 1991 meeting.

viii) **List of Fishing Vessels, 1989**

Data for the List of Fishing Vessels are still outstanding from 4 countries (components) (Denmark-M, France-M, Poland and Spain). Since this list was due to be published last year, all outstanding data are requested to be forwarded to the Secretariat as soon as possible (see Circular Letter 90/06).

b) Research and Editorial

i) **Journal Vol. 10**

Technical editing and preparation, in collaboration with Associate Editors, were completed and Volume 10 containing one invited paper, 3 notices and 2 obituaries was published as planned as a special issue of the Journal with the publication date of December 1990. Volume 10 of the Journal, as agreed by the Scientific Council in September 1989, contained the new cover design after a decade of Journal publications with the old cover.

ii) **Journal Vol. 11**

Technical editing and preparation, in collaboration with Associate Editors, were completed and Volume 11 containing 7 refereed papers and 3 notices was published as planned with the publication date of February 1991.

iii) **Journal Vol. 12**

Technical editing and preparation, in collaboration with Associate Editors were completed in preparation for Volume 12 of the Journal, which is slated to contain 7 refereed papers. Volume 12 is planned for publication in the near future.

A single issue of the Journal is in preparation for publication with respect to papers presented at the Special Session on "Changes in Biomass, Production and Species Composition of the Fish Populations in the Northwest Atlantic Over the Last 30 Years and Their Possible Causes" held in Brussels, September 6-8, 1989.

iv) **Studies No. 15 and 16**

Editing and preparation of Studies Number 15 containing 7 papers and 3 notices was completed and published as planned with the publication date of May 1991.

Editing and preparation of Studies Number 16 containing 21 papers and 3 notices was completed. This special issue containing the papers presented at the 1990 Special Session is due to be published as proposed in 1991.

v) **Scientific Council Reports**

Editing and preparation of the reports of the June and September 1990 meetings of the Scientific Council were completed and published in *NAFO Scientific Council Reports*, 1990 in December 1990.

Editing and preparation of the *Executive Summary* of the June 1991 meeting of the Scientific Council was completed and published in preparation for the September 1991 meeting. This is a new publication undertaken by the Secretariat.

vi) **Index and List of Titles**

The subject and author indexes and lists of titles of 115 research documents and 25 summary documents which were presented at the Scientific Council meetings during 1990, were compiled and presented to the Scientific Council in June 1991 in SCS Doc. 91/02 (24 pages).

The indexes issued over the last 5 years were compiled and the publication of the *Index of Meeting Documents, 1985-89* was completed in December 1990.

c) **Documentations and Biostatistical Compilations**

The following additional materials were compiled and presented to Scientific Council Meetings in June 1991:

- ◇ Tagging activities reported for 1990 (SCS Doc. 91/7).
- ◇ Notes on statistical activities and publications since June 1990 (SCS Doc. 91/9).
- ◇ Provisional nominal catches in the Northwest Atlantic, 1990 (SCS Doc. 91/17).
- ◇ Compilation of research vessel surveys on a stock-by-stock basis (SCS Doc. 91/18).
- ◇ Report of Scientific Council, June 1991 Meeting (SCS Doc. 91/19).

Financial Report for the Year Ended 31 December 1991

An audit of the NAFO accounts for the fiscal year 1991 was completed by the firm of Deloitte and Touche, Chartered Accountants.

The auditor's report is as follows:

To the Chairman and Members of the General Council of Northwest Atlantic Fisheries Organization

We have audited the balance sheet of the Northwest Atlantic Fisheries Organization as at 31 December 1991 and the statements of revenue and expenditures, accumulated surplus and changes in financial position for the year then ended. These financial statements are the responsibility of the Organization's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. These standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Organization as at 31 December 1991 and the results of its operations and the changes in its financial position for the year then ended in accordance with the accounting principles disclosed in the notes to the financial statements.

We further report as required by Rule 7.1 of the Financial Regulations of the Organization that, in our opinion, the financial statements are in accordance with the books and records of the Organization; the financial transactions reflected in the statements have, in all significant respects, been in accordance with the Financial Regulations and the budgetary provisions of the Northwest Atlantic Fisheries Organization; and the monies on deposit and on hand have been verified by certificate received directly from the Organization's depositories or by actual count.

Statement of Revenue and Expenditures
(Year Ended 31 December 1991)

Expressed in Canadian Dollars

	Budget 1991	Actual 1991	Actual 1990
Revenue			
Contributions assessed contracting parties (Note 4)	\$ 735,554	\$ 735,554	\$ 715,026
Allocation from surplus			
For operations	129,276	129,276	143,474
For write-off of contributions		-	23,041
Personal income taxes			
Federal	-	87,494	101,267
Provincial	-	37,228	28,881
Interest	-	30,939	48,210
Sales of publications	-	5,512	6,407
	<u>864,830</u>	<u>1,026,003</u>	<u>1,066,306</u>
Expenditures			
Salaries	560,000	538,670	549,898
Superannuation (Note 5)	73,000	61,908	70,274
Additional help	1,000	-	-
Group medical and insurance plan	29,000	26,170	19,821
Termination benefits	10,000	12,287	18,585
Vacation pay increase	5,000	3,454	5,214
Travel	8,000	8,621	8,788
Transportation	1,000	770	506
Communications	49,000	44,882	47,462
Publications	20,000	19,003	11,825
Contractual services (Note 6)	45,000	41,190	34,471
Materials and supplies	29,000	28,740	26,317
Equipment	5,000	3,899	157
Meetings	30,000	32,717	35,751
Computer services (Note 6)	13,000	13,427	13,942
Removal and travel	-	5,700	30,060
1.5% budgetary restraint	<u>(13,170)</u>	-	-
	<u>864,830</u>	<u>841,438</u>	<u>873,071</u>
Excess of revenue over expenditures before provision for uncollectible accounts	-	184,565	193,235
Provision for uncollectible accounts and write-off of contributions	20,061	20,061	40,917
Excess of revenue over expenditures	<u>\$ (20,061)</u>	<u>\$ 164,504</u>	<u>\$ 152,318</u>

Statement of Accumulated Surplus
(Year Ended 31 December 1991)

Expressed in Canadian Dollars

	1991	1990
Balance, beginning of year	<u>\$ 204,277</u>	<u>\$ 218,474</u>
Allocations		
To operations	129,276	143,474
To write-off contributions	<u>—</u>	<u>23,041</u>
	<u>129,276</u>	<u>166,515</u>
	75,001	51,959
Excess of revenue over expenditures	<u>164,504</u>	<u>152,318</u>
Balance, end of year	<u>\$ 239,505</u>	<u>\$ 204,277</u>

Balance Sheet as at 31 December 1991

Expressed in Canadian Dollars

	1991	1990
ASSETS		
Current		
Cash and short-term deposits	\$ 271,977	\$ 270,664
Contributions receivable (Note 3)	84,256	43,152
Accounts receivable	4,163	1,080
Accrued interest receivable	1,663	2,890
Ex gratia grant receivable	37,228	28,881
Prepaid expenses	<u>8,920</u>	<u>10,927</u>
	<u>\$ 408,207</u>	<u>\$ 357,594</u>
LIABILITIES		
Current		
Accounts payable and accrued liabilities	\$ 4,613	\$ 4,969
Accrued vacation	<u>14,110</u>	<u>10,656</u>
	18,723	15,625
Provision for employee termination benefits	<u>149,979</u>	<u>137,692</u>
	<u>168,702</u>	<u>153,317</u>
EQUITY		
Accumulated surplus	<u>239,505</u>	<u>204,277</u>
Commitment (Note 9)	<u>\$408,207</u>	<u>\$ 357,594</u>

Statement of Changes in Financial Position
(Year Ended 31 December 1991)

Expressed in Canadian Dollars

	1991	1990
Net inflow (outflow) of cash related to the following activities:		
Operating		
Excess of revenue over expenditures	\$ 164,504	\$ 152,318
Item not affecting cash		
Allocation from surplus	<u>(129,276)</u>	<u>(166,515)</u>
	35,228	(14,197)
Changes in non-cash operating working capital items (Note 8)	<u>(46,202)</u>	<u>(31,154)</u>
	<u>(10,974)</u>	<u>(45,351)</u>
Financing		
Increase (decrease) in provision for employee termination benefits	<u>12,287</u>	<u>(495)</u>
Net cash inflow (outflow)	1,313	(45,846)
Cash position, beginning of year	<u>270,664</u>	<u>316,510</u>
Cash position, end of year	<u>\$ 271,977</u>	<u>\$ 270,664</u>

Notes to the Financial Statements

(Year Ended 31 December 1991)

1. Authority and Objective

The Northwest Atlantic Fisheries Organization was established by the Convention on Future Cooperation in the Northwest Atlantic Fisheries which came into force on 1 January 1979.

The objective of the Organization is to contribute through cooperation and consultation to the conservation, rational management and efficient utilization of the fishery resources in the Convention. For that purpose, it compiles statistics, maintains research programs, establishes management goals, and promotes and co-ordinates international surveillance.

2. Accounting Policies

These financial statements have been prepared in accordance with generally accepted accounting principles, except for the policies concerning uncollectible accounts and provincial grants, and reflect the following policies:

a) Contributions assessed contracting parties

Contributions are assessed annually and are recorded as revenue in the year for which billings apply. As approved by the General Council at the general meeting held in September, 1991, an allowance for uncollectible accounts is recorded for contributions that are in arrears.

b) Accumulated Surplus

The Chairman of the General Council, after consultations with representatives of all members of the General Council, may authorize expenditures from accumulated surplus for unforeseen and extraordinary expenses necessary to the good conduct of the business of the Organization. Such funds may not be in excess of 20% of the annual budget for the current financial year.

c) Publications

Costs of publications are charged to expense as incurred.

d) Office furniture and equipment

Costs of office furniture and equipment are charged to expense when purchased. Leases for equipment, which transfer substantially all of the benefits and risks of ownership to the Organization, are not treated as asset purchases (capital leases). Lease payments are charged in the year paid to the contractual services or computer services expenditure categories.

e) Personal Income Taxes

Federal

According to an Order in Council (P.C. 1980-132) issued by the Government of Canada, the Organization comes under the jurisdiction of the Convention on the Privileges and Immunities of the United Nations. Article V, Section 18(b) of this Convention exempts officials of the United Nations organizations from taxation on the salaries and emoluments

paid to them. However, the Order in Council (Section 3.(3)) does not exempt a Canadian citizen, residing or ordinarily resident in Canada, from liability for any taxes or duties imposed by any law in Canada.

Accordingly, as is customary for international organizations, the Organization credits revenue with an amount equal to the Canadian federal income taxes that would be otherwise assessed on its employees.

Provincial

The Organization deducts provincial income taxes from the salaries of Canadian employees and remits amounts deducted on a regular basis to the Province of Nova Scotia. At the end of each year, the Organization applies to the provincial government for an ex gratia grant equal to the amount of provincial personal income taxes paid. Such grants are accrued when ultimate receipt is assured.

f) Pension Plan

The Organization expenses the current contribution plus the payments for the unfunded portion of the plan.

3. Contributions Receivable

This account reflects assessments due (Canadian Dollars) from contracting parties as follows:

	1991	1990
Faroe Islands	\$ 846	\$ -
Cuba	24,827	25,276
Iceland	-	17,876
Romania	37,937	17,876
Japan	1,672	-
Union of Soviet Socialist Republics	<u>56,911</u>	<u>-</u>
	122,193	61,028
Less: Allowance for uncollectible assessments	<u>37,937</u>	<u>17,876</u>
	<u>\$ 84,256</u>	<u>\$ 43,152</u>

4. Contributions Assessed Contracting Parties

Expressed in Canadian Dollars

	1991	1990
Bulgaria	\$ 20,061	\$ 17,876
Canada	406,829	378,061
Cuba	24,827	25,894
Denmark (in respect of the Faroe Islands and Greenland)	60,840	50,469
European Economic Community	59,559	65,346
German Democratic Republic	—	25,701
Iceland	20,061	17,876
Japan	22,532	20,857
Norway	20,502	18,000
Poland	23,371	20,025
Romania	20,061	17,876
Union of Soviet Socialist Republics	<u>56,911</u>	<u>57,045</u>
	<u>\$ 735,554</u>	<u>\$ 715,026</u>

5. Pension Plan

The Organization has a defined benefit pension plan which covers basically all employees. The last actuarial data available is as of 1 October 1989. At that time, the accrued pension obligation was \$717,894 while the assets were valued at \$523,328. The estimated amount of unfunded pension liability at 31 December 1991 of \$150,248 is being funded at the rate of \$28,783 per year.

6. Capital Lease Obligations

Payments with respect to capital lease obligations have been recorded as follows:

	1991	1990
Contractual services	\$ 7,942	\$ 7,942
Computer services	<u>7,399</u>	<u>10,530</u>
	<u>\$ 15,341</u>	<u>\$ 18,472</u>

A balance of \$7,942 is payable in respect of these obligations in 1992.

7. Services Provided Without Charge

Accommodation for the Organization's secretariat in Dartmouth, Nova Scotia is provided without charge by the Canadian Department of Fisheries and Oceans. Accordingly, the related costs, which include rent, grants-in-lieu of property taxes, heat, electricity and cleaning services, are not reflected in these financial statements.

8. Elements of the Statement of Changes in Financial Position

Expressed in Canadian Dollars

	1991	1990
Changes in non-cash operating working capital items		
Contributions receivable	\$ (41,104)	\$ 2,800
Accounts receivable	(3,083)	(170)
Accrued interest receivable	1,227	(73)
<i>Ex gratia</i> grant receivable	(8,347)	(28,881)
Prepaid expenses	2,007	3,716
Accounts payable and accrued liabilities	(356)	(3,351)
Accrued vacation	<u>3,454</u>	<u>(5,195)</u>
	<u>\$ (46,202)</u>	<u>\$ (31,154)</u>
Cash represented by:		
Cash	\$ 251,877	\$ 250,564
Term deposits	20,000	20,000
Petty cash	<u>100</u>	<u>100</u>
	<u>\$ 271,977</u>	<u>\$ 270,664</u>

9. Commitment

As of 1 January 1992, the method to determine the termination benefit was upgraded. These changes will require a one-time increase in the termination benefit payable of approximately \$108,000. No plans have been established on how this liability is to be funded.