

**REPORT OF THE
FIRST ANNUAL MEETING
OF THE
COUNCIL
OF THE
NORTH ATLANTIC SALMON
CONSERVATION ORGANIZATION**

22 - 25 May 1984.

Edinburgh

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD

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VICE-PRESIDENT: MR ALLEN PETERSON JR (USA)
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NASCO (84)40

REPORT OF
THE FIRST ANNUAL MEETING OF THE COUNCIL OF
THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
22-25 MAY 1984

1. OPENING OF THE MEETING

- 1.1 The President, Mr G Eiriksson of Iceland, opened the meeting and welcomed delegates to the first annual meeting of the Council.
- 1.2 A list of the participants is given in Annex 1.
- 1.3 The representative for Finland made an opening statement as a new member of the Council (Annex 2).

2. ADOPTION OF THE AGENDA

- 2.1 The Council adopted the agenda after making two changes to the draft agenda:

Item 6 to be retitled: 'Coordination of the activities of the Regional Commissions' with the original item 'Reports of the Regional Commissions' taken as a sub-head of this item.

Item 7 to be retitled: 'Membership of Commissions' with the original item 'Review of the membership of the West Greenland Commission' taken as a sub-head of this item.
- 2.2 The agenda is contained in NASCO (84)30, (Annex 3).

3. PARTICIPATION OF OBSERVERS AT NASCO MEETINGS

- 3.1 The Council, bearing in mind Rule 27 of its Rules of Procedure, decided to invite Spain and the USSR to participate in its meetings as observers. The representative of the USSR made a statement (Annex 4). The representative of Spain made a statement.
- 3.2 Consultations took place on the question of terms and conditions of participation in meetings. Requests for participation as observers had been received from non-government organisations (Annex 5).

- 3.3 The Council decided to request the Secretary to prepare a position paper on the question of non-governmental observers.

4. STATUS OF RATIFICATIONS OF AND ACCESSIONS TO THE CONVENTION

- 4.1 The Secretary confirmed that Finland deposited its instruments of accession with the Depository on 18 May 1984 and that Sweden deposited its instruments of ratification with the Depository on 17 May 1984.

5. NEW APPLICATIONS FOR ACCESSION TO THE CONVENTION

- 5.1 In the course of the statement referred to above the representative of Spain indicated the interest of the Spanish authorities in acceding to the Convention.
- 5.2 The EEC delegate reported that it was expected that Greenland would no longer be in the EEC after 1 January 1985. In discussion in the Council it was agreed that arrangements should be made to allow continued participation on behalf of Greenland in the work of the organization. The necessary arrangements would be the subject of consultations, conducted by the President if necessary by convening a legal working group, with the aim of taking the necessary Council decisions by mail or other means of textual communication before 1 January 1985.

6. COORDINATION OF THE ACTIVITIES OF THE REGIONAL COMMISSIONS

- 6.1 The President referred to the need to coordinate more fully the activities of the Regional Commissions.

REPORTS OF THE REGIONAL COMMISSIONS

- 6.2 The Chairmen of Commissions reported to the Council on their work.

7. MEMBERSHIP OF COMMISSIONS

- 7.1 The Council, bearing in mind Article 10 of the Convention, decided that Finland shall be a member of the North-East Atlantic Commission.

REVIEW OF THE MEMBERSHIP OF THE WEST GREENLAND COMMISSION

- 7.2 The Council, having regard to Article 10, para. 2 of the Convention, decided that the review and possibility of modifying the membership of the West Greenland Commission shall be suspended until the next meeting of the Council.

8. REPORT OF THE FINANCE AND ADMINISTRATION COMMITTEE

- 8.1 The Finance and Administration Committee presented a report to the Council on the questions which had been referred to it. FAC (84)15, (Annex 6)
- 8.2 In addition to the decisions taken elsewhere on the agenda, on the recommendation of the committee, the Council adopted the following:
- a decision on amendments to the Staff Rules, NASCO (84)31, (Annex 7)
 - a decision on Staff Rule 6.5 and Financial Rule 9.1(e), NASCO (84)32, (Annex 8)
 - a decision on amendments to the Financial rules, NASCO (84)33, (Annex 9)
 - a decision having regard to Financial Rule 11.1 to appoint Coopers and Lybrand of George Street, Edinburgh as external auditors to the organization
 - a decision authorizing the Secretary to enter into contractual arrangements with respect to permanent accommodation for the organization, NASCO (84)34, (Annex 10).
- 8.3 The Council thanked the Chairman of the Finance and Administration Committee for the excellent work of the Chairman and members of the committee.

9. APPOINTMENT OF SECRETARY AND STAFF OF THE ORGANIZATION

- 9.1 The President reported that a Selection Committee had met, considered candidates for the post of Secretary and recommended that the Council appoint Dr Malcolm Windsor as Secretary. The Council unanimously adopted this decision and referred

the question of the conditions of his employment to the Finance and Administration Committee.

9.2 The Secretary thanked the Council for its unanimous decision and expressed his determination that the Secretariat would do its utmost to be of service to the organization.

9.3 The Council adopted the recommendations of the Finance and Administration Committee on the conditions of employment of the Secretary, NASCO (84)35, (Annex 11). With respect to the possible reconsideration of the decision that the appointment be at the A4.8 level on the Coordinated Organisations' scale the Council agreed that information be obtained on comparability with posts in other organisations.

10. CONSIDERATION OF THE 1984 BUDGET, 1985 DRAFT BUDGET AND 1986 FORECAST BUDGET

10.1 Upon the recommendation of the Finance and Administration Committee, the Council adopted a budget for 1985 and took note of a forecast budget for 1986. NASCO (84)36, (Annex 12).

11. AGREEMENT WITH ICES

11.1 The President reported that he had written to the President of ICES proposing administrative arrangements between ICES and NASCO and that a satisfactory exchange of letters had been completed.

12. SCIENTIFIC RESEARCH

12.1 The Council considered a report, NASCO (84)4, (Annex 13), from ICES responding to the request, adopted by the Council at its inaugural meeting, for scientific advice. The Council adopted a decision to request scientific advice from ICES, NASCO (84)37, (Annex 14). The Council also adopted a decision on NASCO research requirements with priorities, NASCO (84)38, (Annex 15).

12.2 The Council expressed its appreciation to the representative of ICES, Mr D Griffiths, for his contribution to the work of the organization.

13. SCIENTIFIC AND STATISTICAL INFORMATION

- 13.1 The Council, taking into Account Article 15, para. 1 of the Convention, requested the Secretary to undertake an analysis of catch statistics for salmon stocks, subject to the Convention, taken in rivers and areas of fisheries jurisdiction of the Parties. In undertaking this task the Secretary shall consult with each Party and with ICES.

14. LAWS, REGULATIONS AND PROGRAMMES

- 14.1 The Council, taking account of Article 15, para. 4 of the Convention, agreed that copies of laws, regulations and programmes in force or, where appropriate, summaries thereof, relating to the conservation, restoration, enhancement and rational management of salmon stocks subject to the Convention in its rivers and areas of fisheries jurisdiction shall be provided to the Secretary.
- 14.2 This information shall be provided in a format requested by the Secretary following consultation with the Parties.

15. IMPLEMENTATION OF THE CONVENTION

- 15.1 There was no discussion on this item.

16. EXTERNAL RELATIONS OF THE ORGANIZATION

- 16.1 The President informed the Council that he had made efforts to comply with the decision of the Council authorising him to sign the Headquarters Agreement. He reported that the United Kingdom Government was not yet able to sign the Agreement.

17. OTHER BUSINESS

- 17.1 Statements were made by the representatives of Canada, the EEC, Faroes (Denmark), Norway and the USA on the work of this first meeting.

18. DATE AND PLACE OF NEXT MEETING

- 18.1 The Council agreed to hold its second annual meeting in

Edinburgh from 3-7 June 1985.

19. CONSIDERATION OF THE DRAFT REPORT OF THE MEETING

19.1 The Council considered a draft report of the meeting.

20. CONSIDERATION OF A PRESS RELEASE

20.1 The Council considered a press release, NASCO (84)39,
(Annex 16).

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
FIRST ANNUAL MEETING OF THE COUNCIL - 22-25 MAY 1984LIST OF PARTICIPANTS

* Denotes Head of Delegation

CANADA

* MR L S PARSONS	<u>Representative</u> Atlantic Fisheries Service, Dept of Fisheries and Oceans, Ottawa
DR G A NADEAU	<u>Representative</u> Faculté des Sciences de l'Education, Université Laval, Quebec
MR E McCURDY	<u>Representative</u> Newfoundland Fishermen, Food and Allied Workers' Union, St John's
DR W M CARTER	Atlantic Salmon Federation, St Andrews
MR B APPLEBAUM	International Directorate, Dept of Fisheries and Oceans, Ottawa
MR R STEIN	International Directorate, Dept of Fisheries and Oceans, Ottawa
MS D PETHICK	International Directorate, Dept of Fisheries and Oceans, Ottawa
DR W G DOUBLEDAY	Fisheries Research Directorate, Dept of Fisheries and Oceans, Ottawa
MR D MEERBURG	Resource Research Directorate, Dept of Fisheries and Oceans, Ottawa
MR R STEWART	Restigouche Salmon-Net Fisherman Association, Restigouche
MS E FELDMAN	Dept of External Affairs, Ottawa
MS S SAUMIER-FINCH	Dept of External Affairs, Ottawa
MR Y CÔTÉ	Dept of Recreation, Fish and Game, Quebec
MR F PINHORN	Newfoundland Dept of Fisheries, St John's
MR B MUISE	Nova Scotia Dept of Fisheries, Musquodoboit Harbour

EEC

* MR J PEARSON	<u>Representative</u> Fisheries Directorate-General, EEC Commission, Brussels
MR J SPENCER	<u>Representative</u> Fisheries Directorate-General, EEC Commission, Brussels
MS M DORAN	<u>Representative</u> Directorate-General for External Relations, EEC Commission, Brussels
MS E TWOMEY	Dept of Fisheries, Dublin
DR R G J SHELTON	Dept of Agriculture and Fisheries for Scotland, Edinburgh
MR J MOELLER-JENSEN	Ministry of Greenland, Copenhagen
DR D J SOLOMON	Ministry of Agriculture, Fisheries and Food, Lowestoft
MR A BORDES	Ministère de la Mer, Paris
MR J MCGHEE	Dept of Agriculture and Fisheries for Scotland, Edinburgh
MR R WILLIAMSON	Dept of Agriculture and Fisheries for Scotland, Edinburgh
MS S J NASON	Ministry of Agriculture, Fisheries and Food, London
MS A M HENRI	Ministry of Agriculture, Fisheries and Food, London
MR E HUTCHINSON	Dept of Foreign Affairs, Dublin
MR F ERSKOV	Ministry of Foreign Affairs, Copenhagen
MR E LEMCHE	Greenland Home Rule, Copenhagen
MR P J ELIASSEN	Ministry of Fisheries, Copenhagen
MR A WORM	Ministry of Greenland, Copenhagen
MS M SIMS	General Secretariat, Council of the European Communities, Brussels
MR G R ZBYSZEWSKI	General Secretariat, Council of the European Communities, Brussels

FAROES (DENMARK)

* MR A OLAFSSON

Representative
Faroe Home Government, Torshavn

MR H PEDERSEN

Representative
Ministry of Foreign Affairs, Copenhagen

MR S POULSEN

Representative
Faroese Commercial Attaché, Aberdeen

MR H I JAKUPSSTOVU

Institute of Fisheries Research, Torshavn

MR O JUSTINUSSEN

Fishing Vessels Owners Association,
Torshavn

FINLAND

* MR P NISKANEN

Representative
Ministry of Agriculture and Forestry,
Helsinki

MR E NIEMELA

Subarctic Station, Kevo

ICELAND

* MR G EIRIKSSON

Representative
Ministry of Foreign Affairs, Reykjavik

MR T GUDJONSSON

Representative
Institute of Freshwater Fisheries,
Reykjavik

NORWAY

* MR B SMØRGRAV

Representative
Ministry of Foreign Affairs, Oslo

MR J SENNESETH

Representative
Ministry of Environment, Oslo

DR K W JENSEN

Representative
Directorate for Wildlife and Freshwater
Fish, Trondheim

MR A LANGELAND

Directorate for Wildlife and Freshwater
Fish, Trondheim

MR K E SAGEN

Consul General, Edinburgh

SWEDEN

* MR T GUSTAVSSON

Representative
National Board of Fisheries, Goteborg

USA

* MR A E PETERSON JR

Representative

National Marine Fisheries Service,
Woods Hole, Mass

MR R A BUCK

Representative

Restoration of Atlantic Salmon in
America Inc, Dublin, New Hampshire

DR F E CARLTON

Representative

National Coalition for Marine Resource
Conservation, Savannah, Georgia

DR V C ANTHONY

National Marine Fisheries Service,
Woods Hole, Mass

MR B J KEFAUVER

Bureau of Oceans and International
Environmental and Scientific Affairs,
Dept of State, Washington, D C

MR J H KUTKUHN

US Fish and Wildlife Service, Dept of the
Interior, Washington, D C

MR D REIFSNYDER

Office of Oceans and Fisheries Affairs,
Dept of State, Washington, D C

MR N A SINGER

Consul General, Edinburgh

MR S APOLLONIO

New England Fishery Management Council,
Saugus, Mass

MR G MANUEL

Atlantic Sea-Run Salmon Commission,
Augusta, Maine

MR T LILLESTOLEN

Office of International Fisheries,
Washington, D C

MR A W NEILL

National Marine Fisheries Service,
Woods Hole, Mass

MR A V STOUT

Atlantic Salmon Federation, Hanover,
New Hampshire

OBSERVERS

SPAIN

DON J J CHAO, International Fishery
Relations, Madrid

USSR

MR A A VOLKOV, Ministry of Fisheries,
Moscow

ICES

MR D GRIFFITH, International Council for
the Exploration of the Sea, Copenhagen

SECRETARIAT

DR M L WINDSOR

Interim Secretary

MRS Z CLARKE

Personal Assistant to Secretary

MISS F McKENZIE

Assistant

MISS S HAY

Assistant

OPENING STATEMENT MADE BY
THE HEAD OF THE DELEGATION FROM FINLAND

Mr President:

On behalf of Finland I am very pleased to address the Council as a full member of this organization, which we consider extremely important in the conservation of North Atlantic salmon stocks as well in the open sea as in coastal areas and of course in rivers of reproduction. The Convention itself provides an excellent framework in pursuing to implement effective conservation and management measures and from this basis I believe our organization is able to achieve valuable results.

Finland ratified the Convention on 25 April and deposited the instruments of accession quite recently, last Friday.

As a member of this organization, our intention is in general to contribute to the conservation of salmon stocks in the Convention area and especially of those stocks which reproduce in water courses located on Finland's territory. Due to geographical conditions Finland and Norway share two water courses running into the North Atlantic of which the Tana River is one of the most important reproduction rivers of salmon in the Convention area. In close cooperation the two countries apply the mutual Convention which regulates salmon fishery in these waters. Conservation and management measures as well as scientific research regarding these stocks will be further developed and promoted. Our intention is to ensure abundant migration of salmon to the spawning sites which enables, on the one hand high smolt production, and on the other hand creates conditions to controlled fishing which is balanced with the stock size. To achieve this end coastal fishing and fishing in the mouths of the rivers should also be regulated adequately. In this respect Finland will be, in this organization, in favour of such management policy which ensures strong salmon stocks and high sustainable yield.

.../...

Mr President, I would like to conclude by saying that in Finland we consider our membership very important and useful for us and we are willing to fulfil all obligations resulting from the Convention or decisions of this organization.

Thank you Mr President.

NASCO (84)30

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
FIRST ANNUAL MEETING OF COUNCIL
22-25 MAY 1984
AT THE GEORGE HOTEL, EDINBURGH, UK.

AGENDA

1. Opening session
2. Adoption of the agenda
3. Participation of observers at NASCO meetings
4. Status of ratifications of and accessions to the Convention
5. New applications for accession to the Convention
6. Coordination of the activities of the Regional Commissions
- Reports of the Regional Commissions
7. Membership of Commissions
- Review of the membership of the West Greenland Commission
8. Report of the Finance and Administration Committee
9. Appointment of Secretary and staff of the organization
10. Consideration of the 1984 budget, 1985 draft budget and 1986 forecast budget
11. Agreement with ICES
12. Scientific research
13. Scientific and statistical information
14. Laws, regulations and programmes
15. Implementation of the Convention
16. External relations of the organization
17. Other business
18. Date and place of next meeting
19. Consideration of the draft report of the meeting
20. Consideration of press release

STATEMENT MADE BY THE
OBSERVER FROM THE USSR

Mr President, Ladies and Gentlemen:

I would like to express my gratitude for the opportunity to attend this meeting of NASCO.

The Soviet fishery organisations have a practical interest in the activities of NASCO. The Atlantic salmon is a traditional species of Soviet fishing in the northern part of the USSR. It has a significance for commercial fisheries and especially for the native population which depends on the Atlantic salmon as part of its livelihood.

In order to increase Atlantic salmon stocks, Soviet organisations use eight river bases for artificial spawning and breeding. From these bases the following numbers of 2-3 year old fish were released into the sea: in 1980 the number was 1.2 million, in 1981, 1 million and in 1982, 1.5 million. In addition these bases release every year 0.5 million small fish of an age of one year. Our catches, however, in recent years have been declining.

Let me present you with some figures concerning Soviet salmon fisheries in the Atlantic. In the overall period 1931-1960, the average annual catch was at the level of 1,000-1,050 tonnes. In the 50's the average annual catch was 1,086 tonnes. In the 60's, however, it dropped to 624 tonnes and in the 70's to 542 tonnes. In 1980, 1981 and 1982 it dropped even further to 631 tonnes, 450 tonnes and 351 tonnes respectively. In 1983 catches were higher. Our scientists explain this decline as the result of the increasing intensification of sea fishing and interception fishing on migratory routes. As you can see the results of our efforts are not satisfactory for the Soviet fisherman and we are, therefore, looking to NASCO in the hope that this organization can take the necessary effective measures.

.../...

I must first stress that, in our country, sea fishing for salmon is prohibited. All fish is taken in the estuaries or in rivers where the passage of a proper quantity of fish to the spawning grounds can be controlled and regulated thus securing the reproduction of the stocks. Therefore we support the idea that salmon fishing should, as a general rule, be prohibited in areas of the high seas outside 12 miles from the baselines.

Rational fishing in the world oceans is impossible without international cooperation. The sea and its inhabitants, including salmon, constitute a united body and fish do not recognise boundaries established by states.

My country stands firmly on the principles contained in the 1982 United Nations Convention on the Law of the Sea and, in particular, that countries in whose rivers salmon originate should have the primary interest in and responsibility for such stocks of the anadromous species and that other states have the obligation to cooperate with the state of origin to conserve these stocks.

My opinion is that NASCO is the proper body to implement the provisions of the Convention on the Law of the Sea and to develop regulatory measures for the fishing of salmon in the North Atlantic.

In conclusion, I assure you that the results of the present NASCO meetings will be reported to the proper Soviet authorities and will be considered carefully and seriously.

Edinburgh, 22-25 May 1984

ANNEX 5

REQUESTS FOR PARTICIPATION AS OBSERVERS
BY
NON-GOVERNMENT ORGANIZATIONS

THE ATLANTIC SALMON TRUST LTD.

Company Registered in England. Reg. No. 904293 Registered Charity No. 252742



PATRON: H.R.H. THE PRINCE OF WALES, KG, KT, GCB

President: The Duke of Wellington MVO, OBE, MC
Vice-President: Vice-Admiral Sir Hugh Mackenzie KCB, DSO, DSC
Chairman: David Clarke
Vice-Chairman: Sir Ernest Woodroffe Ph.D., F.Inst.P., F.I.Chem.E
Secretary: E. S. Earl
Treasurer: M. O'Brien
Director: G. D. F. Hadoke MA., M.Sc(Econ).FIFM

41 Downing Street, Farnham, Surrey GU9 7PH Telephone Farnham (0252) 724400

Dr. Malcolm Windsor,
Ministry of Agriculture, Fisheries
and Food,
Great Westminster House,
Horseferry Road,
London SW1P 2AE

15th February, 1984

Dear Dr. Windsor,

North Atlantic Salmon Conservation Organisation


First of all, on behalf of the President, Chairman and Members of the Atlantic Salmon Trust, I would like to formally express our pleasure over your appointment as Secretary to the North Atlantic Salmon Conservation Organisation. As an independent group working solely on behalf of Atlantic salmon the Trust looks forward to a close liaison with your Organisation through your good offices.

It is because of our independent status and the nature of the work we undertake that I have been requested to submit to the Organisation, through you, an application for the Trust to be granted Observer status at meetings of the Council and the two appropriate Regional Commissions. I appreciate, of course, that you have only just assumed office and that you have yet to obtain secretarial assistance but we are anxious to ensure that with your help our application may be considered at the next meeting of the Organisation's Council in May.

In support of our application I am enclosing for your information some of our publications, including a statement of our aims and objectives. In that connection you may be interested to know that two of our projects for this year include the holding in the University of Surrey (Guildford) a Workshop to discuss Atlantic Salmon Stock Enhancement, and an invitation to Mr. Arni Olafsson of the Faroes Home Government to bring over a small delegation of people from the Atlantic salmon industry to visit our own salmon installations and meet our scientists, managers, etc. These two examples of our work indicate the considerable respect and authority which the Trust has acquired in the field of Atlantic salmon conservation.

I hope very much that you will be able to present our application at the next meeting of your Council, but if you require more information about the Trust, please let me know.

Yours sincerely,

A handwritten signature in cursive script, reading "Gerald Hadoke". The signature is written in dark ink and is positioned above the typed name.

Director

ATLANTIC SALMON TRUST

AIMS AND OBJECTIVES OF THE TRUST

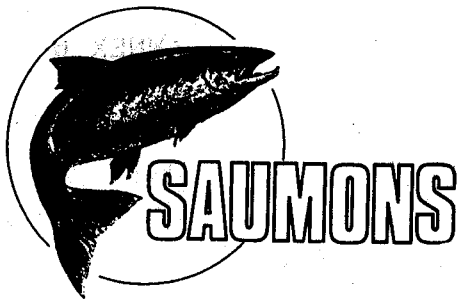
The Trust's main objective is to continue to act as a focal point for the collection and dissemination of new knowledge and facts about Atlantic salmon. It attempts to identify dangers and potential threats to the stocks of the species and works in the closest co-operation with all bodies currently striving for the conservation of salmon anywhere. Being a registered charitable organisation we are prevented from exerting pressure on the Government or members of Parliament, but this does not mean that we refrain from giving considered views on any Government White or Green Paper which concerns the well-being of Atlantic salmon. The Trust appreciates that salmon should not be preserved for its own sake but conserved for the benefit of the community. It is thus an important aim of the Trust to ensure that the true economic and social benefits arising from the country's salmon resource are assessed so that the runs of salmon may be cropped in a manner which provides the optimum benefits to the community and yet allows for the resource to be sustained and developed.

The Trust has long realised that it must concern itself with the international regulation and conservation of the stocks. Thus it has been involved in the organisation of international conferences, the most recent of which gave the impetus for the holding of the International Convention for the Conservation of Salmon in the North Atlantic. The Trust now looks forward to the establishment of the North Atlantic Salmon Conservation Organisation in Edinburgh.

On the European front the Trust has recognised the important role which the E.E.C. must play in international salmon discussions since the European Commission speaks for all member countries in salmon matters. Thus the Trust has been in constant touch with the Commission and its officers and, in addition, has been able to maintain very close links with the European Parliament through the latter's Working Group on Fisheries. Recently the Trust helped to organise and participated in the European Parliament's first 'Hearing' on Atlantic salmon. The Trust presented a paper on the management of salmon in E.E.C. waters to the meeting.

Examples of the Trust's work in the international field include the reports which it has published on the Faroese and Greenland commercial salmon fisheries and on the fisheries of Iceland. At home the Trust has continued to stimulate discussion on matters of importance affecting the management of salmon stocks. Its recent workshop on salmon statistics resulted in action being taken by both the Government and the National Water Council to modify and improve the publication of the nation's salmon statistics. In addition a Workshop on the Economic Evaluation of the salmon resource has resulted in the preparation of evaluation schemes for national and regional consideration in the near future.

Atlantic Salmon Trust
41 Downing Street,
Farnham, Surrey



ASSOCIATION INTERNATIONALE DE DÉFENSE
DU SAUMON ATLANTIQUE

A. I. D. S. A.

ASSOCIATION DE PERSONNES (LOI DE 1901)

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M. Erikson, President
North Atlantic Salmon Conservation
Organization (N.A.S.C.O.)
c/o M. Windsor, Secretary
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St. Andrews House Regent Road
Edinburgh EH1 3DE GRANDE BRETAGNE

Biarritz May 17, 1984

V/Réf. :

N/Réf. : INT RV N° 070

Mr. President

In the last general assembly of A.I.D.S.A. on January 27, 1984, we were lucky enough to have a short report on the first meeting of the North Atlantic Salmon Conservation Organization in Edinburgh, on January 17-21, 1984, by M. BORDES who was the representant of the European Community at this meeting.

After having heard this report, M. Alex PRICHARD, administrator of our association and also administrator of the Atlantic Salmon Trust Ltd, informed us that this trust had applied for an observer status at the North Atlantic Salmon Conservation Organization and that it was its earnest hope that the A.I.D.S.A. would act similarly.

May I precise it is our earnest hope too that our association, with administrators from France, but also from Canada, Great Britain, Ireland and Norway, will be able to make valuable contribution to the conservation of salmon through an observer status at the North Atlantic Salmon Conservation Organization.

Sincerely yours

R. VIBERT
President

FAC (84)15
REPORT OF THE MEETING
OF
THE FINANCE AND ADMINISTRATION COMMITTEE

1. ADOPTION OF THE AGENDA
 - 1.1 The Committee adopted its draft agenda unchanged.
2. STAFF RULES
 - 2.1 The Committee considered detailed working documents prepared by the Interim Secretary relating to the Staff Rules. The Committee recommended amendments to the Staff Rules following this review and prepared a draft decision of Council. (Note: The Council subsequently adopted this decision which is shown in Annex 7).
 - 2.2 Following an analysis of the costs and conditions of bonding the Committee decided to recommend a temporary waiving of Staff Rule 6.5 and prepared a draft decision of Council. (Note: The Council subsequently adopted this decision which is shown in Annex 8).
 - 2.3(1) The Committee agreed guidance notes for the Secretary for Salaries and Allowances based upon those of the Coordinated Organisations, but excluding certain of those allowances and reducing others. With regard to the Education Allowance, the Committee wished to review its operation after one year and to receive an indication of likely costs for a number of staff situations.
 - 2.3(2) The Committee agreed guidance notes for the Secretary on Leave based upon those operated by the Coordinated Organisations, but excluding certain of those rules relating to sick pay and disability and reducing the annual leave allowance in line with the existing NASCO staff rules.
 - 2.3(3) The Committee agreed guidance notes for the Secretary relating to Travel, Subsistence and Removals.

- 2.3(4) The agreed guidance notes referred to above will be circulated by the Secretary to members of the FAC.
- 2.4 The Committee recommended with regard to Rule 8.1 that, as an interim measure, the Secretary should be authorised to obtain medical, hospital and disability insurance for staff members, up to a cost of £1,000 in total. In the event of the total cost exceeding this amount the Secretary should consult the Chairman of the FAC.
- 2.5 With regard to pensions, the Committee recommended that affiliation with a pension scheme be completed within one year of the appointment of staff. The Committee proposed that the Secretary be asked to assess other pension options such as a national scheme, the Coordinated Organisations' scheme, the International Fishery Commission Pension Society (Sun Life Assurance Co of Canada) and the scheme operated by J Van Breda & Co and to provide to the FAC details of the cost and coverage of each scheme.

3. STAFFING OF NASCO

- 3.1 The Committee considered a paper on the level of staffing for NASCO. The Committee agreed that this question was of considerable importance, but felt that it was too early to recommend to Council any increase in staff. The matter should be examined in detail at the next annual meeting.

4. PERMANENT ACCOMMODATION

- 4.1 The Committee considered the property specification and the respective merits of purchase or lease. It recommended to the Secretary that accommodation be obtained initially on a lease basis in view of the budgetary implications of the purchase option. The Committee considered, however, that at a future date there should be a re-examination of the purchase option. The Committee prepared a draft decision of Council.
(Note: The Council subsequently adopted this decision which is shown in Annex 10).

5. FINANCIAL RULES

5.1 The Committee considered, based on documents prepared by the Interim Secretary, a number of matters relating to the present Financial Rules with the aim of improving the effectiveness and efficiency of the organization. It agreed to recommend to the Council a number of amendments to these Rules. The Committee prepared a draft decision of Council.

(Note: The Council subsequently adopted this decision which is shown in Annex 9).

5.2 With regard to the financial bonding of NASCO staff the Committee recommended that Rule 9.1(e) should be waived pending review of the cost and conditions as specified by insurers of such bonding. A draft decision of Council was prepared.

(Note: The Council subsequently adopted this decision which is shown in Annex 8).

5.3 The Committee took note of the accountancy system introduced and accepted the general principles underlying it.

6. APPOINTMENT OF AUDITORS

6.1 The Committee considered three firms of auditors and recommended the appointment of Coopers & Lybrand of George Street, Edinburgh as auditors.

7. NASCO PAPERS

7.1 NUMBERING

The Committee agreed to the numbering system for documents suggested by the Secretary.

7.2 DISTRIBUTION

The Committee considered the question of distribution of documents to outside parties and recommends to Council that documents may be available at an appropriate fee. The

Secretary should develop a proposal of a schedule of fees for FAC's consideration at its next meeting.

8. TRAVEL AND OTHER RELATED COSTS

- 8.1 The Committee decided not to recommend that travel and expenses of Elected Officers of the organization be reimbursed by the organization.

9. 1985 BUDGET AND SCHEDULE OF CONTRIBUTIONS

- 9.1 The Committee considered and amended the Draft Budget prepared by the Secretary and recommended its adoption by Council.
(Note: The Council subsequently adopted this budget which is shown in Annex 12).

10. APPOINTMENT OF SECRETARY

- 10.1 The Committee recommended to Council that the Secretary be appointed for a four year term renewable upon mutual agreement of both parties at the A4.8 level on the Coordinated Organisations' scale (as of 1.7.83, £1,934.70 per month). In addition, the Committee recommended to Council that the Secretary should seek ways to ensure that he remain in his present pension scheme. In the event that this should not be possible, the Secretary should report back to the Chairman of the FAC and seek another alternative consistent with para. 2.5 above. The Committee recommended to Council that NASCO pay a daily subsistence allowance to the Secretary of £50 for a period of two months from the date of appointment. A draft decision of Council was prepared.
(Note: The Council subsequently adopted this decision which is shown in Annex 11).

LIST OF PARTICIPANTS
AT
FINANCE AND ADMINISTRATION COMMITTEE
21-25 MAY 1984

Mr B Kefauver	- USA
Ms D Pethick	- Canada
Mr S Poulsen	- Faroe Islands
Mr J Senneseth, Vice-Chairman	- Norway
* Mr B Smørgrav	- Norway
Mr J Spencer, Chairman	- EEC
Dr M Windsor, Interim Secretary	
* Mr G Zbyszewski	- EEC

* In attendance for part of the meeting only.

NASCO (84)31
DECISION OF THE COUNCIL
ON
AMENDMENTS TO THE STAFF RULES OF NASCO

Having regard to the recommendations of the Finance and Administration Committee, the Council decides to amend the Staff Rules of NASCO as follows:

- Rule 2.2 Delete and insert:
'For the purpose of these Rules the term dependent shall be deemed to include only children aged under 18 years or as further defined in the rules on allowances for dependent children used as guidance by the Secretary'.
- Rule 4.3 (new) 'The Staff Rules apply to staff in both the Professional Category and the General Services Category except that the rules on salaries and allowances do not apply to General Services staff'.
- Rule 5.5 Delete 'salary level' and insert 'category or grade'.
- Rule 5.6 Lines 3 and 4, delete 'level' and insert 'grade'.
- Rule 6.6(a) Line 2, insert 'and grade' after the word 'category'.
- Rule 6.6(e) Line 1, delete 'level' and insert 'grade'.
- Rule 7.7 Line 5, after 'home leave' insert 'of four days'.
- Rules 8.3, 8.4 and 8.5 These rules shall form part of section 7 and be re-numbered 7.9, 7.10 and 7.11. The present rule 7.9 shall become 7.12.
- Rules 8.6, 8.7 and 8.8 are re-numbered 8.3, 8.4 and 8.5.

Rule 8.6 (new) 'All accidents to a staff member incurred at work must be reported immediately to the Secretary'.

Rule 10.4 Delete and insert:

'In the event of the termination by the organization of a Secretariat member's service, compensation at the rate of one month's salary for each year's service shall be paid unless the cause of termination has been gross dereliction of the duties imposed in Rule 2'.

Edinburgh, 22-25 May 1984

ANNEX 8

NASCO (84)32
DECISION OF THE COUNCIL
ON
STAFF RULE 6.5 AND FINANCIAL RULE 9.1(e)

Having regard to the provision of Staff Rule 6.5 on the obtaining of appropriate financial bonding in accordance with Financial Rule 9.1(e):

having regard to the recommendation of the Finance and Administration Committee on the waiving of this rule in present circumstances:

the Council decides to waive Staff Rule 6.5 and Financial Rule 9.1(e) pending a re-examination of the costs and conditions of obtaining such bonding.

NASCO (84)33
DECISION OF THE COUNCIL
ON
AMENDMENTS TO THE FINANCIAL RULES OF NASCO

Having regard to the recommendations of the Finance and Administration Committee:

the Council decides to amend the Financial Rules of NASCO as follows:

- Rule 3.3 Line 1, delete 'both'.
 Line 2, delete 'and estimated expenditure against those appropriations'.
- Rule 3.4 Line 3, delete all of the sentence after 'years'.
- Rule 4.4 Delete and insert:

 'The Secretary may make transfers of up to 20% of appropriations between sections. The President may authorise the Secretary to make transfers of more than 20% between sections. All transfers shall be reported by the Secretary to the next annual meeting of the Council'.
- Rule 7.1 Delete and insert:

 'All income, other than contributions to the budget under Rule 5, that referred to in Rule 7.2 and interest on amounts in the General Fund held temporarily on interest bearing deposits, shall be classified as miscellaneous income and credited to the Working Capital Fund'.
- Rule 8.2(a) Add to the second sentence:

 'or interest bearing accounts operated by the bank where the organization's account is held'.

Rule 8.3 Delete.

Rule 9.3 Line 3, insert 'A statement of' at the beginning of the last sentence.

Rule 9.4(a) Line 2, delete 'for all purchases and contracts exceeding £1,000 sterling' and insert:
'for all purchases and contracts for equipment and office supplies exceeding £1,000 sterling'.

Rule 10.5 Line 3, delete all of the sentence following the word 'Convention'.

Rule 13.1 Line 1, delete 'Council' and insert 'Secretary'.

Edinburgh, 22-25 May 1984

ANNEX 10

NASCO (84)34
DECISION OF THE COUNCIL

AUTHORIZING THE SECRETARY TO ENTER INTO CONTRACTUAL
ARRANGEMENTS ON BEHALF OF NASCO WITH RESPECT TO
ACCOMMODATION FOR THE ORGANIZATION

Having regard to FAC agenda item no. 4, FAC (84)7, with respect to permanent accommodation, the Council authorizes the Secretary to pursue the best possible property leasing arrangement and to enter into appropriate contracts.

The Council notes that this decision is a special arrangement over and above the conditions of Financial Rule 4.2.

NASCO (84)35
DECISION OF THE COUNCIL
ON
THE APPOINTMENT OF SECRETARY

Having regard to Council agenda item no. 9, relating to the appointment of the Secretary, the Council agrees:

1. that the Secretary be appointed for a four year term renewable upon the mutual agreement of both parties at the A4.8 level on the Coordinated Organisations' scale (as of 1.7.83., £1,934.70 per month) and allowances as set out in the Staff Rules.
2. that the Secretary should seek to maintain his present pension arrangements if at all possible, and that the organization will pay the employer's share of such pension coverage.
3. that NASCO pay a daily subsistence allowance of £50 for a two month period from date of appointment.
4. that the President be empowered to write a letter to Dr Malcolm Windsor officially offering him the position of Secretary of NASCO consistent with the above conditions, and in accordance with existing NASCO rules.

Edinburgh, 22-25 May 1984

ANNEX 12

NASCO (84)36

1985 BUDGET

1986 FORECAST BUDGET

1984 REVISED CONTRIBUTIONS

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
 BUDGET FOR 1985 AND FORECAST BUDGET FOR 1986

SECTION	SUMMARY	EXPENDITURE	
		BUDGET 1985	FORECAST 1986
1.	STAFF RELATED COSTS	55,060	57,820
2.	TRAVEL AND SUBSISTENCE	4,880	5,120
3.	CONTRIBUTION TO ICES	12,870	13,510
4.	CONTRIBUTION TO WORKING CAPITAL FUND	3,000	3,000
5.	MEETINGS	2,710	2,850
6.	OFFICE SUPPLIES, PRINTING & TRANSLATIONS	4,000	4,200
7.	COMMUNICATIONS	7,870	8,270
8.	BUILDING RENTAL & SERVICES	19,900	20,300
9.	OFFICE FURNITURE & EQUIPMENT	5,000	5,240
10.	AUDIT & OTHER EXPENSES	1,750	1,840
		117,040	122,150

		REVENUE	
		BUDGET 1985	FORECAST 1986
11.	CONTRIBUTIONS OF CONTRACTING PARTIES	117,040	122,150
12.	MISCELLANEOUS INCOME	-	-
	TOTAL	117,040	122,150

SECTION 1	STAFF RELATED COSTS	BUDGET 1985	FORECAST 1986
1.1	Salaries (before tax). (Secretary, secretarial assistant and temporary staff)	40,560	42,590
1.2	Pensions, allowances and other staff costs. (Pensions, allowances, public liability, bonding and insurances).	22,590	23,720
1.3	Deductions (Staff contributions to pensions, NASCO taxation on salaries)	8,090	8,490
	NET STAFF COSTS	55,060	57,820

SECTION 2	TRAVEL AND SUBSISTENCE	BUDGET 1985	FORECAST 1986
2.1	Travel to post	-	-
2.2	Official travel and subsistence	4,880	5,120
	TOTAL	4,880	5,120

NOTE:

1. 1986 costs assume 5% increase on 1985

SECTION 3	CONTRIBUTION TO ICES	BUDGET 1985	FORECAST 1986
3.1	Annual Contribution	12,870	13,510

NOTES:

1. Assumes a 10% increase in 1985 and no change in the Sterling/Danish Kroner exchange rate.
2. Assumes a 5% increase in 1986 and no change in the Sterling/Danish Kroner exchange rate.

SECTION 4	CONTRIBUTION TO WORKING CAPITAL FUND	BUDGET 1985	FORECAST 1986
4.1	Working capital	3,000	3,000

SECTION 5	MEETINGS	BUDGET 1985	FORECAST 1986
5.1	Rental of facilities for annual conference	1,260	1,320
5.2	Facilities for other meetings	500	530
5.3	Other costs	950	1,000
	TOTAL	2,710	2,850

NOTES:

1. Assumes 5% increase in costs in 1985 and 1986.
2. Nominal sum to allow for possible other meetings run by Secretariat.
3. Hire of typewriters, photocopier etc and cost of reception if held.

SECTION 6	OFFICE SUPPLIES, PRINTING AND TRANSLATION	BUDGET 1985	FORECAST 1986
6.1	Office supplies, printing, publications, translation.	4,000	4,200

NOTES:

1. Assumes a first annual report produced during 1985.
2. Assumes a 5% increase in 1986.
3. During the period of temporary accommodation in the Scottish Office many of the normal office supply items have been provided without charge. We, therefore, have no experience of the actual operating costs and the above figure is a crude estimate.

SECTION 7	COMMUNICATIONS	BUDGET 1985	FORECAST 1986
7.1	Telephones)		
)		
7.2	Telex)	7,870	8,270
)		
7.3	Postage)		

NOTE:

1. During the period of temporary accommodation in the Scottish Office all of the above items have been provided without charge. We have no experience, therefore, of the actual operating costs. The above budgets include 5% increases for 1985 and 1986 based on the figures as originally estimated for 1984.

SECTION 8	BUILDING RENTAL AND SERVICES	BUDGET 1985	FORECAST 1986
8.1	Property rental	11,900	11,900
8.2	Services and other building related costs	8,000	8,400
	TOTAL	19,900	20,300

NOTES:

1. Assumes rental negotiated is subject to review only every five years.
2. Assumes no increase in cost of services etc in 1985 and a 5% increase in 1986.
3. At the time of preparation of these estimates no property rental had yet been negotiated and these costs are, therefore, based on the original per annum estimates.

SECTION 9	OFFICE FURNITURE AND EQUIPMENT	BUDGET 1985	FORECAST 1986
9.1	Furniture	500	520
9.2	Equipment	4,500	4,720
	TOTAL	5,000	5,240

NOTES:

1. Assumes occupancy of new accommodation in 1984 and only residual replacement and/or maintenance costs thereafter.
2. Assumes 5% inflation in 1985 and 1986.

SECTION 10	AUDIT AND OTHER EXPENSES	BUDGET 1985	FORECAST 1986
10.1	Audit and accountancy fees	750	790
10.2	Miscellaneous	1,000	1,050
	TOTAL	1,750	1,840

NOTES:

1. Assumes an annual audit only.
2. To cover representation and other costs not covered elsewhere.
3. Assumes no increase in 1985 and a 5% increase in costs in 1986.

SECTION 11

CONTRIBUTIONS OF CONTRACTING PARTIES - 1985

11.1

The budget for 1985 is £117,040 of which 30% (£35,112) is allocated per contracting party i.e. £4,389, assuming 8 members as listed below.

The balance (£81,928) is allocated according to percentage of total catch.

11.2

CALCULATION OF PERCENTAGE OF CATCH (1983 CATCH DATA)

<u>COUNTRY</u>	<u>CATCH DATA</u>	<u>PERCENTAGE</u>
Canada	1,424	18.0%
Denmark (Faroes - 740) (Greenland - 310)	1,050	13.3%
EEC	3,584	45.5%
Finland	78	1.0%
Iceland	198	2.5%
Norway	1,530	19.4%
Sweden	25	0.3%
USA	1	-
TOTAL	7,890	100.0%

.../...

11.3

CALCULATION OF 1985 CONTRIBUTIONS

COUNTRY	CONTRIBUTIONS			*CREDIT	BALANCE
	FIXED	CATCH RELATED	TOTAL		
Canada	4,389	+ 14,747	= 19,136	957	18,179
Denmark (Faroes (Greenland))	4,389	+ 10,896	= 15,285	987	14,298
EEC	4,389	+ 37,278	= 41,667	1,077	40,590
Finland	4,389	+ 819	= 5,208	-	5,208
Iceland	4,389	+ 2,048	= 6,437	868	5,569
Norway	4,389	+ 15,894	= 20,283	957	19,326
Sweden	4,389	+ 246	= 4,635	-	4,635
USA	4,389	+ -	= 4,389	794	3,595
TOTAL	35,112	+ 81,928	=117,040	5,640	111,400

NOTE: *Where a credit is shown it is from 1984 following the increased membership. Revised 1984 budget calculations are in section 12.

SECTION 12 REVISED CALCULATION OF CONTRIBUTIONS TO 1984 BUDGET
 TAKING INTO ACCOUNT
 MEMBERSHIP OF FINLAND AND SWEDEN

12.1 The Convention (Article 16, para. 5) requires that the contribution of a party for which this Convention has entered into force during the course of a financial year shall for that year be a part of the annual contribution proportional to the number of complete months remaining in the year from the date of entry into force for that party. Sweden and Finland would therefore contribute seven twelfths of their respective annual contributions for 1984.

12.2 RECALCULATION OF PERCENTAGE CATCHES (1982 CATCH DATA)
 FOR 1984 BUDGET

<u>COUNTRY</u>	<u>SIX MEMBERS</u>		<u>EIGHT MEMBERS</u>	
	<u>CATCH DATA</u>	<u>%</u>	<u>CATCH DATA</u>	<u>%</u>
Canada	1,798	21.9	1,798	21.7
EEC	3,966	48.4	3,966	47.9
Faroes (Denmark)	939	11.4	939	11.3
Finland	-	-	54	0.7
Iceland	147	1.8	147	1.8
Norway	1,345	16.4	1,345	16.2
Sweden	-	-	25	0.3
USA	6	0.1	6	0.1
TOTAL	8,201	100.0	8,280	100.0

12.3 RECALCULATION OF 1984 CONTRIBUTIONS

The 1984 re-calculation below has been made by re-allocating the 30% of the budget paid on a member basis but allowing for a seven twelfths contribution by Finland and Sweden. The balance has been allocated by dividing the catch related contribution between six members for five-twelfths of the year and between eight members for seven-twelfths of the year. The additional membership produces credits which are shown in the last column and are carried forward to the 1985 contributions (shown in Section 11).

<u>COUNTRY</u>	<u>CONTRIBUTIONS</u>				<u>PAID</u>	<u>CREDIT</u>
	<u>FIXED</u>		<u>CATCH RELATED</u>	<u>REVISED</u>		
Canada	4,470	+	16,281	= 20,751	21,708	957
EEC	4,470	+	35,957	= 40,427	41,504	1,077
Faroes (Denmark)	4,470	+	8,477	= 12,947	13,934	987
Finland	2,607	+	305	= 2,912	-	-
Iceland	4,470	+	1,346	= 5,816	6,684	868
Norway	4,470	+	12,170	= 16,640	17,597	957
Sweden	2,607	+	131	= 2,738	-	-
USA	4,470	+	75	= 4,545	5,339	794
TOTAL	32,034	=	72,742	= 106,776		

Edinburgh, 22-25 May 1984

ANNEX 13

NASCO (84)4
SCIENTIFIC ADVICE FROM ICES

INTERNATIONAL COUNCIL FOR THE
EXPLORATION OF THE SEA

11 May 1984

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
COUNCIL

PAPER NASCO (84)4
SCIENTIFIC ADVICE FROM ICES

NOTE: This paper contains all of the scientific advice
from ICES and will also be sent to each Regional
Commission.

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The questions posed by the Regional Commissions to ICES are appended to this report on pages 27 and 29.

NORTH ATLANTIC SALMON

A. REVIEW OF CATCHES

Table 1 presents annual catches in home waters of North Atlantic salmon. Catches for 1983 are provisional. Total catches continued to decline to well below the 1980 level of 8 000 tonnes, but the 1983 catch may not be less than that of 1982 when provisional figures are finalised. Canadian catches experienced a sharp decline from 1 800 tonnes in 1982 to 1 400 tonnes in 1983.

B. THE SALMON FISHERIES IN THE NORTH ATLANTIC

B.1 North-East Atlantic

B.1.1 Effects of the Fishery in the Norwegian Sea and Faroes Area on Home Waters

No additional calculations were carried out for the fishery north of the Faroes zone for which no new data were available.

Description of the Faroes and Norwegian Sea Fisheries

Table 2 shows nominal catches taken in the northern Norwegian Sea between 1965 and 1983. Catches increased rapidly in the late 1960s to over 900 tonnes and then declined gradually through the 1970s to around 200 tonnes. In 1982 and 1983, catches increased again to about 600 and 400 tonnes respectively as a result of increased fishing by Faroese vessels. The data in Table 3 show that from a moderate catch in the Faroes area in the mid-1970s the fishery escalated substantially from 1979 to reach a yield of over 1 000 tonnes in 1981. In 1982 and 1983, a quota of 625 tonnes was applied to this fishery.

In the seasons 1980/81 and 1981/82, no area restrictions were imposed on the salmon fishery in the Norwegian Sea. In these years, only a few fish were caught in October and November and at this time of year the fishery was confined close to the Faroe plateau. The fishery in January is very dependent on weather conditions, and there have been considerable differences between the catches in recent years. In January 1982 a relatively good fishery took place over a large area in the Norwegian Sea. As the 1980/81 and 1981/82 seasons proceeded, the fishery extended as far as 71°N, but in the 1982/83 season the Faroese vessels were restricted to the Faroes fisheries zone. The fishery was good in February, March and April 1983, and a number of vessels had taken their quota by the end of April. However, some vessels which started late continued fishing into May and June.

Assessment of the Effects of the Fishery at the Faroes

To estimate the total losses to European home water stock for each tonne landed in the Faroese fishery, the same model was used as in previous assessments. This takes into account non-catch fishing mortality, differences in weight between salmon in home waters and the Faroes, the age distribution and time of return of different sea-age classes and their survival rates. The results of this assessment suggest that for each tonne of salmon landed in the Faroes fishery, about 1.6 tonnes are lost to stocks returning to European home waters. The approximate nature of some of the parameter values and the possibility of annual variation of all parameters should be noted. Therefore the value of 1.6 tonnes lost to home waters for each tonne of salmon caught in the Faroes fishery estimated above must be considered approximate.

Research Requirements

Tagging:

It was agreed that feasibility studies should be carried out using the material now available from home waters to determine whether the stocks of salmon at the Faroes are likely to be separated using scale discrimination techniques before undertaking any large tagging experiment at the Faroes. Further scale samples from home water stocks known to be contributing to the fishery at the Faroes should be supplied to the Scottish laboratory to provide a larger data base on which to base future analyses.

Feasibility studies were called for on the use of smolt tagging to establish exploitation rates for monitored rivers and their use in obtaining material for discriminant analysis.

Results of any studies which would help in assessing the relative merits, including feasibility and costs, of smolt tagging programs and a program of tagging in the sea should be made available.

Sampling programs:

Because no parameters used in the current assessment model were brought forward which could not be studied by modifications to the shore-based sampling program, it was recommended that the observer program at sea be suspended. Tissue and blood sampling programs were both at a stage at which no further samples were required unless further research offered opportunities for improved discrimination between stocks and identification of maturity status, respectively.

Given a suspension of the observer program at sea, the market sampling program at the Faroes should be expanded. Scanning for micro and other tags should be continued for at least 5 years at the Faroes to permit recovery of tags from in 1984 and 1985 smolts.

B.1.2 Exploitation and Fishing Mortality on Salmon Stocks in the Northeast Atlantic Commission Area

Estimates of exploitation rates, based on tagged fish, were presented for some home water fisheries in Norway, Scotland, Iceland and Ireland. A tagging experiment in Norway also led to an estimate of the exploitation rate of the Norwegian Sea salmon fisheries, including that at the Faroes. The exploitation rate U is defined as the number of fish caught in a fishery divided by the number of fish available.

Tables 4 and 5 present the results from a Norwegian tagging experiment, involving the release of Carlin-tagged wild and hatchery-reared smolts at the mouth of the River Imsa (southwestern Norway). The hatchery-reared fish were derived from nine parent stocks, including the stock native to Imsa. On return to the River Imsa, all ascending adult fish were captured in a trap at the river mouth. Observations available to date refer to fish returning to home waters as one-sea-winter fish in 1982 and as two-sea-winter fish in 1983. Table 4 shows exploitation rates of 49% to 99% on returning one-sea-winter fish and 70% to 100% on two-sea-winter fish. Published estimates for several years between 1950 and 1974 for the Laerdalselv River, using counts of spawning salmon, varied from 60% to 92%, while published estimates for 1964-74 for the River Eira, based on redd counts, varied from 40% to 63%.

Table 5 shows estimated exploitation rates in the Norwegian Sea derived from the River Imsa tagging described above. They are less than 10% for one-sea-winter fish and vary from 0% to 68% for two-sea-winter fish. The relationship between exploitation rate estimates and size of returning salmon suggests a size selective fishery.

Table 6 shows estimated exploitation rates in various Scottish fisheries for periods between 1952 and 1983, based on tagging and release of returning salmon caught in coastal bag nets. Fish caught by fixed engines were assumed unavailable to river sweep net fisheries and fish caught by both coastal net fisheries were unavailable to rod and line fisheries.

Exploitation rates for the North Sea net and coble fishery from 1976-83 varied from 42% to 53% on one-sea-winter salmon and from 39% to 63% on multi-sea-winter fish. Corresponding estimates for 1983 for the River Spey were $11\% \pm 3\%$ for nets and $7\% \pm 3\%$ for rod and reel.

Data relating to Icelandic rivers have been published. In two of these rivers there is both a net and rod fishery and in one case, escapement has been estimated using a resistivity fish counter. In the other two rivers, rod fishing is the only method of capture and in one case, escapement has been estimated using a mechanical fish counter. The exploitation rate on the two rivers with fish counters has been calculated from the escapement and reported catches. Natural mortality during the period that fish are available to the fishery, and non-catch fishing mortality were considered negligible. Exploitation rates on the other two rivers were calculated from mark-recapture experiments, making similar assumptions to those previously described for Scottish coastal tagging experiments. The resulting figures ranged from approximately 0.2 (rod fishery) to 0.85 (rod and net fishery).

Unpublished results of a smolt tagging experiment for one Irish river system, the Burrishoole, were reported verbally to ACFM. Data are at present available from a single year (1982) and suggest an exploitation rate on this stock greater than 80%.

Data from a Swedish tagging study of hatchery-reared smolts released on the west coast of Sweden showed a high exploitation rate by Norwegian home water fisheries on returning fish from the experiment. Quantitative data were not available to the Working Group.

Conclusions

ACFM noted that the above estimates were directly applicable only to the years and areas from which they were calculated. It appears that a wide range of exploitation rates occur in home water fisheries in the Northeast Atlantic, ranging from a few percent to over 90%. The exploitation rates estimated for Scottish fisheries showed a wide range between areas, but were relatively stable between years at the same site. The estimated exploitation rates from Norwegian studies were high, although ACFM recognised that the exploitation rates on stocks in Norway other than those reported could be quite different. Data from studies of four Icelandic fisheries resulted in a range of exploitation rate estimates from 20-85%. The lowest figures were obtained for western Scotland, the highest for fish released in the River Imsa (southwest Norway).

Data Deficiencies and Needed Research

ACFM recommends that estimates of exploitation rates for areas where they are not currently available should be obtained. The estimates should include figures for non-catch fishing mortality in home waters. Estimates should also include figures for illegal fisheries and non-reporting of legal catches. It would be preferable if these could be collected from carefully chosen rivers, which, taken together, would be representative of the exploitation rate in home waters and contributions to sea fisheries.

B.1.3 Options for Total Catches with Safe Limits

The problems of estimating a Total Allowable Catch (TAC) for salmon were examined in detail by ACFM in 1982. The parameters which would be required for a TAC assessment were re-examined at the May 1984 meeting of ACFM, and all new information available to these parameters was evaluated.

Recruitment

Little new information was presented describing stock/recruitment relationships for Atlantic salmon stocks. In addition to the requirement for data relating to such relationships discussed in 1982, ACFM recognised that TAC assessments would require estimates of recruitment into the exploited phase of the life cycle. Research is currently being undertaken by the Scottish laboratory with the aim of evaluating total annual Scottish smolt production. Although such an approach widely adopted could provide a basis for the assessment of recruitment, it may not be possible to provide such estimates annually, and the possibility of significant fluctuations in post-smolt mortality should be noted. The calculation of a TAC within safe biological limits should, therefore, incorporate values for post-smolt mortality.

Growth

Some improvements have been made in the estimation of growth parameters for a limited number of stocks.

Migration

No new data were presented to the Working Group.

Natural Mortality

No new data were available to the Working Group.

Stock Composition

Information is required on the spatial and temporal distribution of stocks and biological characteristics of stocks. The ability to discriminate between salmon from different stocks in mixed fisheries is a necessary prerequisite to obtaining such information. Data relating to wild fish of known origin taken in the Faroese fishery are inadequate to allow satisfactory reference standards to be defined for this fishery for the development of a discriminant function.

Catch Statistics

The catch statistics currently reported by most countries are nominal catches. For assessment purposes, these figures would need to be corrected for non-reporting of catches and non-catch fishing mortality. In addition, sex and sea-age composition are required for all landings.

ACFM concluded that the new information available was not adequate to vary its advice in 1982, and that it would not be possible at the present time to estimate and advice on a single TAC which would maintain the home water stocks and safeguard spawning within safe biological limits. At this time it is not possible to calculate a TAC for high sea fisheries for salmon in the Northeast Atlantic due to the inadequacy of available data. In principle, a TAC is a desirable means of limiting the fishing mortality exerted in high seas fisheries and to achieve a target level of exploitation for them, but it is doubtful whether a single TAC would be a practicable method to adequately ensure spawning escapement within safe biological limits for stocks which are, at least in part, harvested in mixed stock fisheries operating either on the high seas or in home waters.

B.1.4 Distribution of Salmon Stocks - Northeast Atlantic Commission Area

The information available to the ACFM comes from three main sources:

- I. High seas fisheries,
- II. Research vessel surveys,
- III. Incidental observations and illegal fisheries.

Figure 1 represents a synopsis of areas, where salmon have been found and does not imply their absence in the remainder of the Commission area.

High seas fisheries

The Norwegian and the Barents Seas are the only areas where high sea fisheries have taken place to any extent.

During the history of the high seas fisheries, the areas fished have varied widely. Compiling all areas fished, however, it appears that viable salmon fisheries have taken place in almost the entire Norwegian Sea from the Shetland-Faroe-Iceland Ridge up to at least 74°N and extending into the Barents Sea as far as Novaya Zemlya.

From tagging data some information, however scarce, exist on the origin of stocks migrating to various parts of the Norwegian Sea. Of 1 757 salmon (mostly one-sea-winter fish) tagged at sea between 62°30' and 63°00'N and between 5°W and 7°W (i.e., just north of the Faroes) 89 were recaptured in home water fisheries. The distribution of the recaptures indicated that the majority of the tagged fish migrated to Scotland, Norway and Ireland and, to a lesser extent, England, Northern Ireland, Sweden and USSR.

Recaptures of salmon tagged as smolts in the Faroese fisheries have confirmed that rivers in Norway, Scotland, Sweden, England and Ireland contribute to this fishery.

Despite the apparent mixing, within the Faroese zone, of salmon from Sweden, Scotland and Norway as shown by recaptures of fish tagged as smolts, the proportion of tags recovered per 10 fish caught appears to be higher to the north and northwest of the Faroes. This would imply that the salmon stocks are not randomly mixed within the Faroese area, which was found to be statistically significant ($p < 0.001$). Further north in the Norwegian Sea, recaptures of salmon tagged as smolts originating from all European countries have been reported at least as far north as 70°N. The proportions of tag returns originating from Norway and USSR in relation to other European countries, however, appears to increase with latitude.

Research vessel surveys

Outside the Barents Sea and the Norwegian Sea, experimental fishery has been conducted in the Irminger Sea. In this experiment, salmon catches were widely distributed within this area. The catch per unit effort was less than that found in the West Greenland fishery. Based on scale characteristics, 21% of the salmon caught were of North American origin and 79% European.

Incidental observations and illegal fisheries

Salmon have been caught incidentally throughout the North Sea and the Irish Sea. Illegal fishing is known to have taken place as far as 50 nm of the northwest Irish coast.

Data deficiencies and needed research

It was pointed out that a complete and general answer to the question of this section would require a costly research program. Answers could be given on some aspects with more modest programs if NASCO could elaborate on the kind of information required. As it is doubtful that a major program can be prepared in the near future, delay in feedback from NASCO on the kind of accuracy of the data required would not be serious.

B.1.5 Salmon Biomass in the Faroese Fishing Zone

ACFM was not able to assess the salmon biomass in the Faroese fishing zone, nor to estimate the average weight gained, nor the level of feed consumed. No estimates of salmon biomass in the Faroese area were available, nor was there information on the duration of stay in the Faroese zone or the food consumed there.

The total stock of salmon in the Faroese area might be estimated from catch in number per unit effort, if better knowledge becomes available on the behaviour of salmon during the feeding season. At the present stage, however, there has been neither confirmation of the basic assumptions underlying the proposed model, nor estimation of values for the critical parameters entering the model, but an experiment based mainly on acoustic tagging of salmon might provide the lacking knowledge and permit an estimate of absolute stock. This approach will be evaluated by ICES and NASCO will be advised of the results.

Data deficiencies and needed research

The deficiencies in data required to assess the salmon biomass in the fisheries zone of the Faroe Island and to estimate the average weight gained and the food consumed by salmon in this area were discussed. It was concluded that it was a complex question but could be approached in two ways:

1. Estimate average biomass and average instantaneous growth rate at a number of times during the year with no relation to immigration and emigration of individual fish,
2. Estimate biomass taking into account the duration of stay at the Faroes of individual fish, which would require apart from data on abundance, data on duration of stay, size at time of arrival and departure, specific growth rates by sea-age class, stomach samples for feeding rate, food consumption and conversion rates. It would also be necessary to have estimates throughout the year and over the entire Faroe fisheries zone. These estimates would have to be ongoing to establish annual variation.

Estimates of salmon abundance could, in principle, be provided by refinements of the catch rate model described above, by tagging and possibly by acoustic surveys. Tagging programs are discussed on page 2.

B.1.6 Effects of Harvesting Salmon at Different Stages of Their Migration Routes

Available information which could be used to describe the salmon migration routes is very scarce apart from in some inshore areas. The question could, therefore, only be answered in relation to the various fisheries. With regard to the Faroese fishery, the relative effect on returns to home waters is presented in the text table below. From this it appears that the highest relative losses occur when harvesting young fish which would have matured one year later and the least when harvesting older fish which would have matured the same year.

Assessment of the relative effects on returns to home waters of harvesting salmon at different stages of their migration routes

<u>Age at catch</u>	<u>Age at home</u>	<u>Relative loss</u>
1	1	1.77
1	2	3.12
2	2	1.40
2	3	2.19
3	3	1.29
3	4	1.47

Within the Commission area there are a number of interception fisheries inside national 12 mile limits in which salmon originating from other countries are caught. From tagging data it appears that most of these fish would have reached home water a few weeks after capture and the relative losses consequently not very great. However, significant numbers of these fisheries are conducted with drift nets which in addition to the reported landings also induce non-catch fishing mortality.

Data deficiencies and needed research

The deficiencies in the data available from the Faroes and Norwegian Sea areas and home waters to assess the relative effects of harvesting salmon at different stages of their migration routes were outlined on p.6: non-catch fishing mortality, ratio of the weight at each sea-age class in home waters to the mean weight at Faroes, proportion by weight at Faroes, proportion by weight of each sea-age class relative to the total nominal catch, estimated proportion of the fish of each sea-age class in the fishery returning in the same and subsequent years and survival rates of different sea-age classes between Faroes and home waters. Further deficiencies were identified as data needed to improve estimates of specific growth curves and a requirement for sex ratios in the light of the information on the selectivity by sex due to the differences in timing of the fishing seasons in home waters.

The need for information on post-smolt mortality, which had been identified by many authors, was highlighted. Information on this subject would help to clarify whether there is large-scale straying of salmon which do not return to home waters.

B.2 West Greenland and Related Home Water Fisheries

B.2.1 The West Greenland Fishery 1982 and 1983

Statistics and composition of the fishery and the regulations in force

The reported nominal catches of salmon at West Greenland in the years 1960 to 1983 are given in Table 7.

The 1982 fishery took place in the period 25 August to 26 November resulting in a nominal catch of 1 077 tonnes which was 176 tonnes or 14% below the quota of 1 253 tonnes. As in previous years, the total quota (TAC) was divided into two components: a "free component" (1 021 tonnes) for which all licensed fishermen could fish, and a "small boat component" (232 tonnes) allocated to small vessels on a district basis. The free component was closed by 16 September, the catch at that date amounting 993 tonnes. The small boat component was fished for thereafter, and as the catches between

17 September and 11 October were only 53 tonnes, the regulatory scheme was revised so that the remaining part was opened to all licensed fishermen. However, only a few fishermen switched back to salmon fishing at that time, and from 12 October to 26 November only 31 tonnes were taken.

The 1983 fishery was opened on 10 August and the last landing of that year was made on 13 November, when the total nominal catch was 310 tonnes, i.e., 74% below the quota of 1 190 tonnes. The "free component" of the quota was 958 tonnes and the "small boat component" 232 tonnes. After the first two weeks' fishing the catch was much below those made during the first two weeks of the 1981 and 1982 seasons. This tendency continued throughout the 1983 season. In the text table below, the total catches for the first week and the two first weeks for the years 1981-83 are given:

Year	Nominal catch in tonnes	
	First week	First two weeks
1981	465	735
1982	470	766
1983	105	192

The geographical distribution of the landings in 1982 and 1983 fisheries (Table 8) was rather similar to those in 1976-81, i.e., the main part of the catch was from NAFO Divisions 1B and 1C (Figure 2). The distribution of the fishery in terms of distance to the shore is not known, but the fishery took place between the shore and approximately 40 nm from the baseline.

All the catch was taken by gill nets. Most of the catch was taken by drift nets, although some inshore set gill nets were still in use. The mesh size in force is 140 mm (stretched mesh). This is a target mesh size, not a minimum mesh size. The type of boats participating in the salmon fishery varies from small open boats to small cutters up to 60 GRT.

No measures of effort are available. Reports of reduced participation after the initial phase suggest that there was less fishing effort in 1983 than in previous years. The number of licences is not a reliable measure of fishing effort since many licencees do not participate in the fishery.

Origin of salmon at West Greenland

A new data base for discriminating continent of origin of salmon has been developed, based on scale samples from fisheries in 1980 in home waters in North America and Europe. The new data base was established because of observed changes in the growth of European-origin salmon in 1980. Country of origin was not considered as the data base was thought to be insufficient for this type of analysis.

A test sample independent from the data base used for developing the discriminant function showed a mis-classification of only 2% with the new technique. Further test samples collected in the home water fisheries of Europe and North America in 1982 and 1983 indicated mis-classifications of 6.6% and 4.6%, respectively. Only a small bias was observed in favour of either group in both years.

The new discriminant function was used to identify the continent of origin of salmon in the West Greenland fishery in 1982 and 1983. The results indicated that the proportion of salmon of North American origin in samples from commercial catches at West Greenland in 1982 was 62% (95% CL⁹⁵ 60-64)

* CL means 95% confidence limits

and in research vessel catches in 1982 it was 47% (95% CI 43-52). In samples from commercial catches in 1983 it was 40% (95% CI 41-38) (Table 9). These confidence limits assume that sampled fish were taken at random throughout the catches, but the sampling at West Greenland in 1982 was limited and the high value of 62% depends heavily on a single catch landed at Godthåb. This 1982 value derived by combining numbers of North American and European salmon sampled from landings at Holsteinsborg and Godthåb shows the largest discrepancy between research and commercial vessels in the time series (Table 9). Comparisons to investigate spatial and temporal trends showed no temporal trends but differences in the North American proportion between NAFO Divisions and inshore and offshore areas were indicated. There is no trend in proportion of continent of origin of research and commercial catches at West Greenland, but the observed value of 40% of North American origin in the 1983 commercial samples is considerably below those of the previous two years.

Biological characteristics

Biological characteristics of salmon were recorded by sampling research vessel catches in 1982 and commercial catches in 1982 and 1983. The samples were analysed for fork length, whole weight, and age differences among the fish identified to continent of origin. North American-origin salmon were shorter and lighter than their European counterparts, similar to previous observations. The sea- and smolt-age compositions of samples collected at West Greenland in 1982-83 are summarised in Table 10. The sea-age composition in 1982 of 6.0% multi-sea-winter salmon and previous spawners is derived from a combination of samples of commercial landings in NAFO Divisions 1B and 1D. Samples from 1B had a higher percentage of multi-sea-winter salmon and previous spawners (7.7%) than those from 1D (2.8%). The 1983 samples, although more numerous, were also taken in 1B and 1D, but comparison of individual samples showed a uniform distribution of sea ages. The increase in the proportion of multi-sea-winter salmon and previous spawners in 1982 and 1983 is consistent with fish plant records of the weight distribution of commercial landings landed in Divisions 1B.

In 1982 there was a small reduction in mean smolt age observed in samples from commercial and research vessel catches at West Greenland in comparison with that observed previously. In 1983, there was a substantial reduction in mean smolt age observed in samples from commercial catches in 1B and 1D and, correspondingly, a large increase in proportion of on-year old smolts from Europe. This value of 35% is more than twice the 1982 value of 15%.

B.2.2 Possible Causal Factors for Low 1983 Catches at West Greenland and Implications for 1984

The water temperature off West Greenland has decreased considerably during the past 3-4 years. The mean temperature of the water column in June 1983 was about 0.4°C, the lowest recorded since 1970. Surface water temperatures were also quite low, similar to those experienced in the early 1970s. This was most likely to be due to an abnormally strong 1982/83 winter cooling in the Davis Strait area, resulting in greater formation of ice which inhibited normal summer temperature increases. ACFM was also informed that the East Greenland current was abnormally strong in 1983, and that its border with the warmer Irminger current was sharply defined and further offshore than normal at West Greenland. No direct observations of these hydrographical events on the distribution of salmon were reported.

Significant correlations ($R^2 = 0.40$ and 0.65 , $p < 0.05$) were obtained for catch per unit effort on sea surface temperature during experimental fishing in 1972 and 1982 but not within other years. Similar data for all years combined 1969-83 show a weak correlation ($R^2 = 0.11$).

A review of the sea-age composition of the 1983 catches at West Greenland suggests that one-sea-winter salmon were not as abundant, relative to the multi-sea-winter salmon, as in previous years.

The low 1983 catch of one-sea-winter and multi-sea-winter salmon at West Greenland is coincident with low abundance of one-sea-winter and multi-sea-winter salmon in Canada (Table 1) and multi-sea-winter salmon in USA. The total landings in eastern Canada in 1983 were the second lowest recorded in recent years. Since almost one half of the salmon normally harvested at West Greenland is of Canadian origin, a low abundance of Canadian salmon producing stocks would negatively impact on the catches at West Greenland.

Low returns of two-sea-winter spring salmon to several rivers in Scotland, December 1983 - April 1984, also suggest low abundance of some stock components that would normally be expected to make a significant contribution to West Greenland catches in 1983. ACFM has no evidence of reduced abundance of salmon originating from other countries which would have contributed to the West Greenland fishery in 1983.

Although hard data are not available, field observations suggest that low catch rates were experienced by Greenlandic fishing vessels in the initial phase of the fishery in 1983. This resulted in a subsequent reduction in the number of vessels fishing for salmon.

Low abundance of spawners occurred in 1978 and 1979 in many Canadian rivers, probably as a result of lower than normal marine survival of the 1977 smolt class. The subsequent reduced egg depositions in 1978-79 would affect the abundance of one-sea-winter and two-sea-winter salmon with total ages three and four in 1983. Thus, the lower than normal abundance of one-sea-winter salmon originating in rivers in Nova Scotia, New Brunswick and parts of insular Newfoundland and Québec, and two-sea-winter salmon in some Gulf of St. Lawrence rivers, may be at least partly attributed to low egg depositions in 1978 and 1979. This does not, however, totally explain the almost uniform low abundance of one-sea-winter and two-sea-winter salmon throughout the Canadian fisheries, particularly of salmon from spawning before 1978 and 1979.

There was no indication of reduced survival of eggs to smolts related to the 1982 smolt class.

Reduced marine survival of hatchery-reared smolts of St. John River origin was noted for 1982 releases and, to a lesser extent, for the 1981 releases (see section on Marine Survival). One-sea-winter and two-sea-winter return rates for releases of hatchery-reared smolts 1974-82 were significantly correlated ($R^2 = 0.45$ and 0.56 , respectively) with recorded Canadian catches and can, therefore, be considered to be an index of marine survival for Canadian salmon stocks. Thus, the reduced marine survival in the 1981 and 1982 smolt classes would appear to contribute partly to the low abundance of one-sea-winter and two-sea-winter salmon in Canada and at West Greenland.

ACFM concluded that the low catch at West Greenland in 1983 was possibly caused by several factors:

1. low sea temperatures which may have affected the catch rates and/or availability of salmon,
2. reduced stock abundance in Canada, and reduced abundance of the spring-run component in Scotland, and
3. possible reduced fishing effort.

There was evidence for Canadian stocks that low abundance was influenced by low egg depositions and lower marine survival.

It was concluded above that the low abundance of some stock components which normally contribute to catches at West Greenland may have been partly responsible for the low 1983 catch there. Low abundance would suggest low returns of two-sea-winter salmon to some rivers in 1984. It is, however, likely that this will vary between rivers and countries. The lower abundance of salmon of North American origin relative to those of European origin at West Greenland in 1983 seems to indicate that a relatively lower return is more likely to occur in North America than in Europe. This is supported by the low abundance of one-sea-winter salmon in Canada in 1983. No estimate of stock size for 1983 is available to quantify the extent of the expected low return of two-sea-winter salmon in 1984.

Any decrease of fishing effort and/or decrease in catchability of salmon at West Greenland in 1983 would mean that the low catch at Greenland could exaggerate the apparent low stock abundance. In view of the Working Group's previous advice that catching of fish at West Greenland impacts on the catch of salmon in home waters, a reduction in fishing-mortality at West Greenland will reduce the loss to home waters.

B.2.3 Effects of Catches at West Greenland upon Home Water Stocks and Fisheries

The most recent assessment by ICES of the effects of the West Greenland fishery upon subsequent stocks and yields in home waters was made in 1980. The fisheries in the Norwegian Sea were assumed not to catch salmon returning from West Greenland. The validity of this assumption has been questioned and is examined below. Assessments since that time have been concentrated on estimating TACs corresponding to varying opening dates equivalent to a TAC of 1 190 tonnes with the opening date of 10 August assuming a 140 mm mesh size. ICES has been guided in these analyses by the principle of ensuring the same proportion in the catch as in the mixture of stocks at West Greenland between the component originating from rivers in North America and that originating from Europe.

Although some of the parameters, for instance the proportional contribution by continent of origin, do fluctuate somewhat between years, the ACFM did not find sufficient changes in the parameters to warrant a new assessment on the direct effect of the West Greenland fishery on home water stocks and yield.

From its most recent assessment, ACFM concluded that for each tonne of European-origin salmon in the reported catch at West Greenland, from 1.29 to 1.75 tonnes would be lost, on average, to European home water stocks. Similarly, for each tonne of North American-origin salmon in the reported catch at West Greenland, from 1.47 to 2.00 tonnes would be lost to North American stocks. Thus, the combined loss to home waters per tonne of reported catch at West Greenland is likely to be from 1.37 to 1.85 tonnes.

ACFM noted that the recapture rate at West Greenland per 1 000 fish tagged as smolts in Scotland has decreased in most recent years. Since the overall reporting rate for recaptures in the Greenland fishery seems not to have decreased to the same extent, it appears that the contribution of Scottish rivers to salmon at West Greenland may have decreased in most recent years. Moreover, the effect of the Greenland fishery upon Scottish stocks seems to be mainly on the spring-run of salmon, and the abundance of this component of the Scottish stock has decreased in recent years as the relative abundance of other components of this stock has increased.

B.2.4 Effects of Home Water Catch Levels upon Subsequent Spawning Stock and Smolt Production

Exploitation rates of salmon in home waters can vary over a very wide range of values, from less than 10% to over 90%. The exploitation rate U is defined as the catch in numbers divided by the number of salmon available to the fishery concerned. The significance of the exploitation rate with respect to spawning stock and smolt production depends upon the capacity of the particular natal river to support egg deposition and rearing of fry, parr and smolts. When this capacity is reached or exceeded, the relationship between the escapement from the home water fishery and subsequent smolt production becomes less than proportional or, perhaps, inverse. Otherwise, the relationship between escapement and smolt production is direct, as is the case with most of the Canadian rivers examined. Assuming egg deposition and rearing capacities are not reached or exceeded, it is more advantageous to reduce exploitation rates that are high than rates that are relatively low. For example, if the exploitation rate is 90%, a 10% reduction would almost double spawning escapement; whereas, if the exploitation rate is 20%, a 50% reduction (to an exploitation rate of 10%) would only increase escapement by 12.5%. Growth and natural mortality between the period of the home water fishery and spawning are assumed to be negligible, so that the reduction in spawning stocks resulting from home water catches is approximately proportional (1:1).

B.2.5 Effect of the Faroese Fishery on the Occurrence of Salmon at West Greenland

Tagging of salmon at sea close to the Faroes between 1969 and 1975 produced evidence that the Faroese fishery harvested salmon that would otherwise be available to the West Greenland fishery. Three of the 91 recoveries from the 1 751 fish tagged in Faroese waters were made at West Greenland. There has been no tagging at sea at the Faroes since 1975.

In recent years the fishery at the Faroes has moved north where it now harvests salmon which are roughly 80% maturing and more than 90% two-sea-winter and older. The West Greenland fishery harvests salmon which are non-maturing and more than 90% one-sea-winter (Table 10). The age composition of the present catch at Faroes is older than that of both the catch in earlier years and the fish which were tagged. This change in age composition is attributed to the recent northward movement of the fishery. The age composition of the present Faroese catch resembles that reported for the 1971-73 Danish long-line fishery in the Norwegian Sea situated north of latitude 68°.

On the basis of the differences in maturity status and sea-age composition of the catches in the Faroese and Greenland fisheries, ACFM concluded that the Faroese fishery does not harvest significant numbers of salmon that would otherwise subsequently be available to the West Greenland fishery. It was noted, however, that the Faroese fishery may be harvesting salmon on their return migration from West Greenland to European rivers. Further, the Faroese fishery may be impacting on spawning stock which contribute to both Faroese and Greenland fisheries.

On the basis of the two recent recaptures of tagged fish from Canada in the Faroese fishery, ACFM noted that the fishery at Faroes harvests some salmon that might otherwise return to North American rivers. These fish might however be strays. Scale samples for discriminant scale analysis to establish the extent of North American fish in the Faroes catch should be made available.

C. MARINE SURVIVAL

Poor marine survival of the 1982 smolt class was not apparent for a number of Atlantic salmon stocks (Table 11). There was direct evidence for poor marine survival from one Canadian river, the St. John. There was also indirect evidence, based on low harvests and escapements, of poor marine survival for some salmon stocks in Labrador, the east coast of Newfoundland, and the north shore of Québec. In the North Esk, Scotland, there was direct evidence that the marine survivals of the 1980-82 smolt classes were lower than values observed for smolt classes 1974-76. There is no information to identify possible causes. Observations in Sweden and Iceland suggest that marine survival of salmon can be adversely affected by cold temperatures at sea.

D. RESEARCH PRIORITIES FOR NORTH ATLANTIC SALMON IN THE CONTEXT OF NASCO

It was agreed that a list of NASCO research priorities would be helpful to ICES. The following was proposed as an amended version of the statement considered by NASCO at its January 1984 meeting:

Effective conservation, restoration and enhancement of North Atlantic salmon stocks require the establishment and maintenance of a scientific information base and the better understanding of mechanisms whereby natural factors and human interventions affect salmon stocks. The Council recognises the vital role of coordination of research and compilation of data which could be played by ICES. The following programs of research are considered essential for NASCO to meet its objectives:

1. A systematic program should be undertaken to monitor all North Atlantic salmon fisheries. Biological samples of catches should be taken in addition to the compilation of statistics of catch, fishing effort, exploitation rates, non-catch fishing mortality^m, fishing gear and seasons.
2. A statistical data base of catch, fishing effort, seasons and fishing gear, together with artificial smolt production, mark and recapture data and biological sampling information should be developed.
3. Research should continue on the identification of the location of origin of salmon. These studies should aim to improve scientific methodology, increase knowledge of salmon migration and provide estimates of total stock production.
4. Specific rivers, some of which should include multi-sea-winter stock components, should be selected and monitored over a long period to provide information on annual smolt production, exploitation rates, geographical distributions of catches, wherever taken, adult returns and spawning escapement. Such monitoring should aim additionally to improve knowledge of factors influencing the salmon productivity of the freshwater habitat leading to improved estimates of optimal spawning levels and assessment of means to improve the productivity of salmon rivers.

^m Non-catch fishing mortality refers to fish mortalities generated directly or indirectly by fishing which are not included in recorded catches.

5. A program should be developed to define and study factors influencing the natural mortality and age at maturity of salmon in the sea with special emphasis on determining the extent and causes of mortality in the months following the entry of smolts into the sea.
6. In addition it would be desirable to determine the geographical distribution of salmon throughout the marine phase.

Abundance Projection for Canadian Salmon Stocks in 1984

The poor returns of one-sea-winter salmon abundance in Canada in 1983 indicate low returns of two-sea-winter salmon in 1984. The low egg depositions in northern rivers in 1978 and 1979 are expected to result in low returns of one-sea-winter salmon in 1984 and two-sea-winter salmon in 1985. Most large salmon-producing rivers in the Gulf of St. Lawrence and the St. John River have experienced reduced egg depositions in recent years. Thus, the low abundance is expected for these stocks for several years. Since these stocks are known to make a significant contribution to the West Greenland fishery, the projected low abundance of Canadian stocks may reduce the catch rates in that fishery from historical average levels.

Table 1. Nominal catches of SALMON in home waters (in tonnes round fresh weight) 1960-1983

YEAR	France T	Eng- land Wales		Scotland 5)			Ireland b)			N Ir- land (b)(c)			Norway d)			Swe- den (Vc)		Fin- land		USSR ^{e)}		Ice- land			Canada 1)			USA	Total f) all Countries	
		T	S	G	T	S	G	T	S	G	T	S	G	T	S	G	T	S	T	S	T	S	G	T	S	G	T			
1960	50-100	283	927	503	1,436	-	-	-	743	139	-	-	-	-	1 659	40	-	-	-	1 100	100	-	-	-	-	-	-	1 636	<2	7 212
1961	50-100	232	772	424	1,196	-	-	-	707	132	-	-	-	-	1 533	27	-	-	-	790	127	-	-	-	-	-	-	1 583	<2	6 403
1962	50-100	316	808	932	1 740	-	-	-	1 459	366	-	-	-	-	1 936	45	-	-	-	710	125	-	-	-	-	-	-	1 719	<2	8 483
1963	50-100	325	1 166	530	1 698	-	-	-	1 458	366	-	-	-	-	1 786	23	-	-	-	480	145	-	-	-	-	-	-	1 861	<2	8 146
1964	50-100	307	513	1 001	1 914	-	-	-	1 617	377	-	-	-	-	2 147	36	-	-	-	590	135	-	-	-	-	-	-	2 069	<2	9 268
1965	50-100	320	836	728	1 563	-	-	-	1 457	281	-	-	-	-	2 000	40	-	-	-	590	133	-	-	-	-	-	-	2 116	<2	8 576
1966	50-100	387	788	636	1 624	-	-	-	1 238	287	-	-	-	-	1 791	36	-	-	-	570	106	-	-	-	-	-	-	2 359	<2	8 475
1967	50-100	420	867	1 276	2 133	-	-	-	1 463	449	-	-	-	-	1 980	25	-	-	-	883	146	-	-	-	-	-	-	2 863	<2	10 417
1968	50-100	282	783	760	1 563	-	-	-	1 413	312	-	-	-	-	1 514	20	-	-	-	827	162	-	-	-	-	-	-	2 111	<2	8 279
1969	50-100	377	539	1 408	1 947	-	-	-	1 730	267	-	-	-	-	1 383	22	-	-	-	360	133	-	-	-	-	-	-	2 202	<2	8 496
1970	50-100	527	503	826	1 329	-	-	-	1 787	297	-	-	-	-	815	22	-	-	-	448	195	-	-	-	-	-	-	2 323	<2	8 173
1971	50-100	426	496	496	923	1 419	-	-	1 639	234	-	-	-	-	771	18	-	-	-	417	204	-	-	-	-	-	-	1 992	<2	7 631
1972	34	442	598	1 106	1 693	200	1 604	1 904	1 904	210	1 054	514	1 568	18	32	18	32	18	462	250	1 201	558	1 759	2 434	2.7	0.9	9 802	9 563	9 614	
1973	12	450	661	1 303	1 964	244	1 686	1 930	1 930	182	1 220	506	1 726	23	50	23	50	23	772	256	1 651	783	2 434	2.7	0.9	9 563	9 614	9 614		
1974	13	383	578	1 053	1 631	170	1 958	2 128	1 64	164	1 149	484	1 633	32	76	32	76	32	709	225	1 589	960	2 539	2 485	1.7	0.8	7 188	7 311	7 311	
1975	25	447	669	892	1 561	274	1 942	2 216	164	164	1 038	499	1 537	26	76	26	76	26	811	266	1 573	912	2 485	2 506	0.8	2.4	7 311	6 007	6 007	
1976	9	208	328	682	1 010	109	1 452	1 561	113	113	1 063	467	1 530	20	66	20	66	20	NA	225	1 721	785	2 506	2 545	4.1	2.5	6 356	8 040	8 040	
1977	19	345	369	762	1 131	145	1 227	1 372	110	110	1 018	470	1 488	10	59	10	59	10	NA	230	1 883	662	2 545	2 680	5.5	6.0	7 314	6 212	6 212	
1978	20	349	781	542	1 323	147	1 082	1 230	148	148	668	382	1 050	10	37	10	37	10	NA	291	1 225	320	1 545	1 287	2.5	6.0	7 314	6 212	6 212	
1979	10	261	598	478	1 075	105	922	1 097	99	99	1 150	681	1 831	12	26	12	26	12	430	225	705	582	1 287	2 680	5.5	6.0	7 314	6 212	6 212	
1980	30	360	861	283	1 134	202	745	947	122	122	1 352	478	1 830	17	34	17	34	17	631	249	1 763	917	2 680	2 437	6.0	6.4	6 212	6 085	6 085	
1981	20	493	843	389	1 233	164	521	685	101	101	1 189	467	1 656	26	44	26	44	26	450	163	1 619	818	2 437	1 798	6.4	1.3	6 085	6 085	6 085	
1982	20	286	596	496	1 092	63	930	993	132	132	986	363	1 348	25	54	25	54	25	311	147	1 082	716	1 798	1 424	1.3	1.3	6 085	6 085	6 085	
1983 ^a	16	424 ^h	361 ^h	231	592 ^h	150	1 506	1 656	187	187	945	585	1 530	NA	57	NA	57	NA	NA	198	911	513	1 424	1 424	1.3	1.3	6 085	6 085	6 085	

S = Salmon (two or more sea winter fish) G = Grilse (one sea winter fish) T=S+C
a = Provisional figures
b = Catch on River Foyle allocated 50% Ireland and 50% N Ireland
c = Not including angling catch (mainly grilse)
d = Before 1966 sea trout and sea char included (5% total)
e = USSR catch mainly salmon (2 or more sea winter fish)
f = French catch taken as 75 tonnes from 1960-1971 and USA catch as 1 tonne from 1960-1971
g = Salmon and grilse figures for 1962-1977 corrected for grilse error
h = The difference between provisional and final figures are likely to be larger than in previous years because of delay in processing the returns
i = Includes estimates of local sales and by-catch

Table 2

Reported nominal catches in the northern Norwegian Sea long-line fishery north of latitude 67°N: 1965-1983 (tonnes round fresh weight)

Danish catches converted from gutted weight with a factor 1.16

Year	Denmark		Faroes		Germany Fed. Rep.		Norway		Sweden		Total Longline Catch
	No. of vessels	Catch	No. of vessels	Catch	No. of vessels	Catch	No. of vessels	Catch	No. of vessels	Catch	
1965	1-2	^a	0	0	0	0	0	0	0	0	^a
1966	10	^a	0	0	0	0	0	0	0	0	^a
1967	22	77	0	0	0	0	0	0	6	^a	^a
1968	28	177	-	-	0	0	0	0	16	126	77 ^c
1969	40	413	0	0	5	24	100 ^c	450 ^c	2	24	403 ^c
1970	60	481	-	-	4	21	420 ^c	300 ^c	1	24	911 ^c
1971	20	162	0	0	2	9	300 ^c	300 ^c	1	17	946 ^c
1972	20	182	0	0	2	4	300 ^c	250 ^c	1	20	488 ^c
1973	15	233	0	0	0	0	200 ^c	200 ^c	2	50	506 ^c
1974	10	148	0	0	0	0	0	0	1	25	533 ^c
1975	15	245	0	0	0	0	0	0	1	30	373 ^c
1976	20	264	0	0	0	0	0	0	1	25	475 ^c
1977	24	192	0	0	0	0	0	0	1	25	289
1978	13	124	0	0	0	0	0	0	0	0	192
1979	10	118	0	0	0	0	0	0	0	0	124
1980	7	127	?	28	0	0	0	0	0	0	118
1981	8	213	-	-	0	0	0	0	0	0	155
1982	7	334	?	259	0	0	0	0	0	0	213
1983	9	383	0	0	0	0	0	0	0	0	593
											383

^a Catch not known

^c Estimated catch

Table 3

Reported nominal catches in the Faroese Area long-line fishery 1968-1983
(tonnes round fresh weight)

Converted from gutted weight with a factor 1.11

Year	Denmark		Faroes		Total Longline Catch
	No. of vessels	Catch	No. of vessels	Catch	
1968	0	0	2	5 ^a	5
1969	0	0	4	7	7
1970	0	0	5	12 ^a	12
1971	0	0	0	0	0
1972	0	0	2	9	9
1973	0	0	5	28	28
1974	0	0	5	20	20
1975	0	0	6	28	28
1976	0	0	9	40	40
1977	0	0	9	40	40
1978	2	14	8	37	51
1979	2	75	7	119	194
1980	6	150	22	568	718
1981	6	100	38	1025 ^a	1.125
1982	6	74	31	606	680
1983 ^b	6	62	25	678	740

^aA small part of the catch taken more than 200 miles from the Faroese baseline

^bPreliminary data

Table 4

Estimated exploitation rates in Norwegian home waters assuming 50% and 70% tag reporting rates

Stock	1 SW fish		2 SW fish	
	50%	70%	50%	70%
R Insa wild	0.88	0.84	0.93	0.90
R Insa	0.80	0.74	0.92	0.89
R Sandvik	0.89	0.85	0.95	0.93
R Figgjo	0.84	0.79	0.95	0.94
R Alta	0.97	0.95	0.97	0.95
R Eira	0.93	0.91	0.86	0.82
R Ardy	0.91	0.87	0.91	0.88
R Suldal	0.86	0.82	0.77	0.70
R Lone	0.57	0.49	0.83	0.78
R Figga	0.99	0.98	1.00	1.00

Table 5

Estimated exploitation rates in the Norwegian Sea assuming 50% and 70% tag reporting rates in Norwegian home waters

Stock	1 SW fish		2 SW fish	
	50%	70%	50%	70%
R Insa wild	0.00	0.00	0.25	0.32
R Insa	0.01	0.01	0.38	0.46
R Sandvik	0.00	0.00	0.50	0.58
R Figgjo	0.00	0.00	0.26	0.32
R Alta	0.02	0.03	0.55	0.64
R Eira	0.06	0.08	0.48	0.55
R Ardy	0.01	0.02	0.58	0.65
R Suldal	0.06	0.08	0.38	0.44
R Lone	0.00	0.00	0.00	0.00
R Figga	0.00	0.00	0.59	0.68

Table 6. Exploitation rates on all combined Scottish sea-winter salmon tagged at coastal netting stations 1952-1983.

Area	Year	Number Tagged	Fixed Engine		Net and Coble		Rod and Line	
			U	Cl ¹⁾	U	Cl	U	Cl
West Coast	1981-83	258	0.04	0.02	0.03	-	0.05	0.03
Northwest Coast	1979-81	916	0.06	0.02	0.03	0.01	0.02	0.01
North Coast	1977-79	776	0.06	0.02	0.10	0.02	0.03	0.01
Moray Firth	1978-83	2349	0.10	0.01	0.09	0.01	0.05	0.01
East Coast	1952-55, 1977-78	1280	0.28	0.02	0.27	0.03	0.02	0.01

1) Confidence limit

**Table 7. Nominal Salmon Catches at West Greenland 1960-1983
(in Tonnes, Round Fresh Weight)**

	Norway	Faroes	Sweden	Denmark	Gill-net and drift-net	TOTAL	TAC
					Greenland ^{d)}		
1960	0	0	0	0	60	60	
1961	0	0	0	0	127	127	
1962	0	0	0	0	244	244	
1963	0	0	0	0	466	466	
1964	0	0	0	0	1539	1539	
1965	a)	36	0	0	825	861	
1966	32	87	0	0	1251	1370	
1967	78	155	0	85	1283	1601	
1968	138	134	4	272	579	1127	
1969	250	215	30	355	1360 (385) ^{d)}	2210	
1970	270	259	8	358	1244	2146 ^{c)}	
1971	340	255	0	645	1449	2689	
1972	158	144	0	401	1410	2113	
1973	200	171	0	385	1585	2341	
1974	140	110	0	505	1162	1917	
1975	217	260	0	382	1171	2030	
1976	0	0	0	0	1175	1175	1190
1977	0	0	0	0	1420	1420	1190
1978	0	0	0	0	984	984	1190
1979	0	0	0	0	1395	1395	1190
1980	0	0	0	0	1194	1194	1190
1981	0	0	0	0	1264	1264	1265 ^{e)}
1982	0	0	0	0	1077	1077	1253 ^{e)}
1983	0	0	0	0	310	310 ^{b)}	1190 ^{e)}

a) Figures not available, but catch is known to be less than the Faroese catch.

b) Provisional

c) Including 7 metric tons caught on long-line by one of two Greenland vessels in the Labrador Sea early in 1970.

d) Up to 1968 gill-net only, after 1968 gill-net and drift-net. The figures in brackets for the 1969 catch are an estimate of the minimum drift-net catch.

e) TAC corresponding to specific opening dates of the fishery.

Factor used for converting landed catch to round fresh weight in fishery by Greenland vessels = 1.11. Factor for Norwegian, Danish and Faroese drift-net vessels = 1.10.

Table 8 Distribution of nominal catches (tonnes) taken by Greenland vessels in 1973-1983 by NAFO Divisions according to place where landed.

Year Division	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983 ¹⁾
IA	182	44	124	166	201	81	120	52	160	111	14
IB	194	116	168	302	393	349	343	275	347	330	77
IC	145	229	175	262	336	245	524	404	346	239	93
ID	385	290	204	225	207	186	213	231	202	136	41
IE	487	395	315	182	237	113	164	158	158	167	55
IF	192	88	185	38	46	10	31	74	31	76	30
Not known									20	18	
Total	1 585	1 162	1 171	1 175	1 420	984	1 395	1 194	1 264	1 077	310
E. Greenl.	+	+	+	+	6	8	+	+	+	+	+
TOTAL	1 595	1 162	1 171	1 175	1 426	992	1 395	1 194	1 264	1 077	310

1) Provisional figures

Table 9.
Percentage (by number) of North American and European salmon in
research vessel catches at West Greenland 1969-1983 and from commercial samples
1978-1983.

Year	Sample size	Percentage North American	95% confidence interval		Percentage European	95% confidence interval	
			Upper	Lower		Upper	Lower
RESEARCH							
1969	212	51	57	44	49	56	43
1970	127	35	43	26	65	74	57
1971	247	34	40	28	66	72	50
1972	3488	36	37	34	64	66	63
1973	102	49	59	39	51	61	41
1974	834	43	46	39	57	61	54
1975	528	44	48	40	56	60	52
1976	420	43	48	38	57	62	52
1977	-	-	-	-	-	-	-
1978(a)	606	38	41	34	62	66	59
1978(b)	49	55	69	41	45	59	31
1979	328	47	52	41	53	59	48
1980	617	58	62	54	42	46	38
1981	-	-	-	-	-	-	-
1982	443	47	52	43	53	58	48
1983	-	-	-	-	-	-	-
COMMERCIAL							
1978	392	52	57	47	48	53	43
1979	1653	50	52	48	50	52	48
1980	978	48	51	45	52	55	49
1981	4570	59	61	58	41	42	39
1982	1949	62	64	60	38	40	36
1983	4896	40	41	38	60	62	59

(a) during fishery

(b) research samples after fishery closed

Table 10.
Sea age composition from research vessel and commercial catches of Atlantic salmon at West Greenland, 1969-83.

Year	Type	Sea Age Composition (%)			Total number
		1SW	MSW	PS	
1969	Research	93.8	4.9	1.3	226
1970	Research	93.8	4.1	2.1	145
1971	Research	99.2	0.4	0.4	251
1972	Research	94.1	5.6	0.3	877
1973	Research	93.8	4.4	1.8	113
1974	Research	97.7	1.7	0.6	836
1975	Research	97.6	2.0	0.4	535
1976	Research	95.7	2.6	1.7	422
1977	No Observations				
1978	Research	96.9	1.1	1.1	609
1979	Commercial	96.6	2.1	1.3	1655
	Research	96.7	1.8	1.5	340
1980	Commercial	97.5	2.2	0.3	980
	Research	98.4	1.1	0.5	617
1981	Commercial	97.0	2.5	0.6	4559
1982	Commercial	93.6	6.0	0.5	1922
	Research	95.3	2.4	2.2	491
1983	Commercial	90.5	8.1	1.4	4744

Table 11.

Annual variation in survival of smolts originating from sample North American and European Rivers

Country and Stock	Description ¹ of Data Set	Sea-age of Return	Indices ² of Survival from Smolt to Adult Stage for Smolt Year Classes									
			1974	1975	1976	1977	1978	1979	1980	1981	1982	
<u>Canada</u>												
Saint John River	Hatchery, returns to home river	1	1.58	2.37	2.08	0.87	1.80	4.00	1.80	1.33	0.60	
		2	0.48	0.64	0.66	0.30	1.17	0.82	0.36	0.24	-	
Area N, Newfoundland	Wild, returns to sea fisheries and home river	1	10.53	12.76	15.66	6.76	19.78	13.75	9.19	12.06	12.00	
<u>Ireland</u>												
Burrishoole River	Wild, returns to home river	1	9.21	6.04	4.14	6.17	9.41	7.82	2.87	5.06	5.60	
		2	0.50	0.28	0.19	0.09	0.49	0.77	0.19	0.31	-	
Corrib River	Wild, returns to fisheries and home river	1	-	-	-	-	-	-	6.1	6.8	10.5	
<u>Northern Ireland</u>												
Bush River	Wild, returns to home river	1	-	-	6.21	6.46	5.77	10.68	5.63	-	7.79	
		2	-	-	1.45	1.19	1.00	1.63	0.59	-	-	
<u>Scotland</u>												
North Esk River	Wild, returns to sea fisheries and home river	1	36.00	11.36	23.78	-	-	-	8.36	11.00	10.69	
		2	9.91	9.32	17.45	-	-	-	7.40	5.70	-	
		3	0.35	0.20	0.46	-	-	-	0.31	-	-	
<u>Norway</u>												
Orsta River	Wild, returns to sea fisheries and home river	1	-	-	-	-	-	1.52	0.72	1.49	-	
		2	-	-	-	-	-	1.01	0.14	0.28	-	
Mixed	Hatchery, returns to sea fisheries and home river	1	-	-	-	-	-	1.55	1.46	1.07	-	
		2	-	-	-	-	-	1.17	0.99	0.94	-	
<u>Finland</u>												
Neiden River	Wild, returns to sea fisheries and home river	1	-	-	0.97	0.75	0.35	-	-	-	-	
		2	-	-	0.19	0.61	0.16	-	-	-	-	
		3	-	-	0.29	0.66	0.18	-	-	-	-	
Tana River	Wild, returns to sea fisheries and home river	1	-	0.34	1.26	2.67	0.51	0.91	-	-	-	
		2	-	0.52	0.58	0.71	1.35	0.40	-	-	-	
		3	-	0.31	0.31	0.39	0.34	0.40	-	-	-	

1 Identifies origin of smolt groups as hatchery or wild and specifies the area of return or capture as adult fish.

2 Indices of survival expressed as the percentage of smolts captured in fisheries and/or returning to home waters as adults.

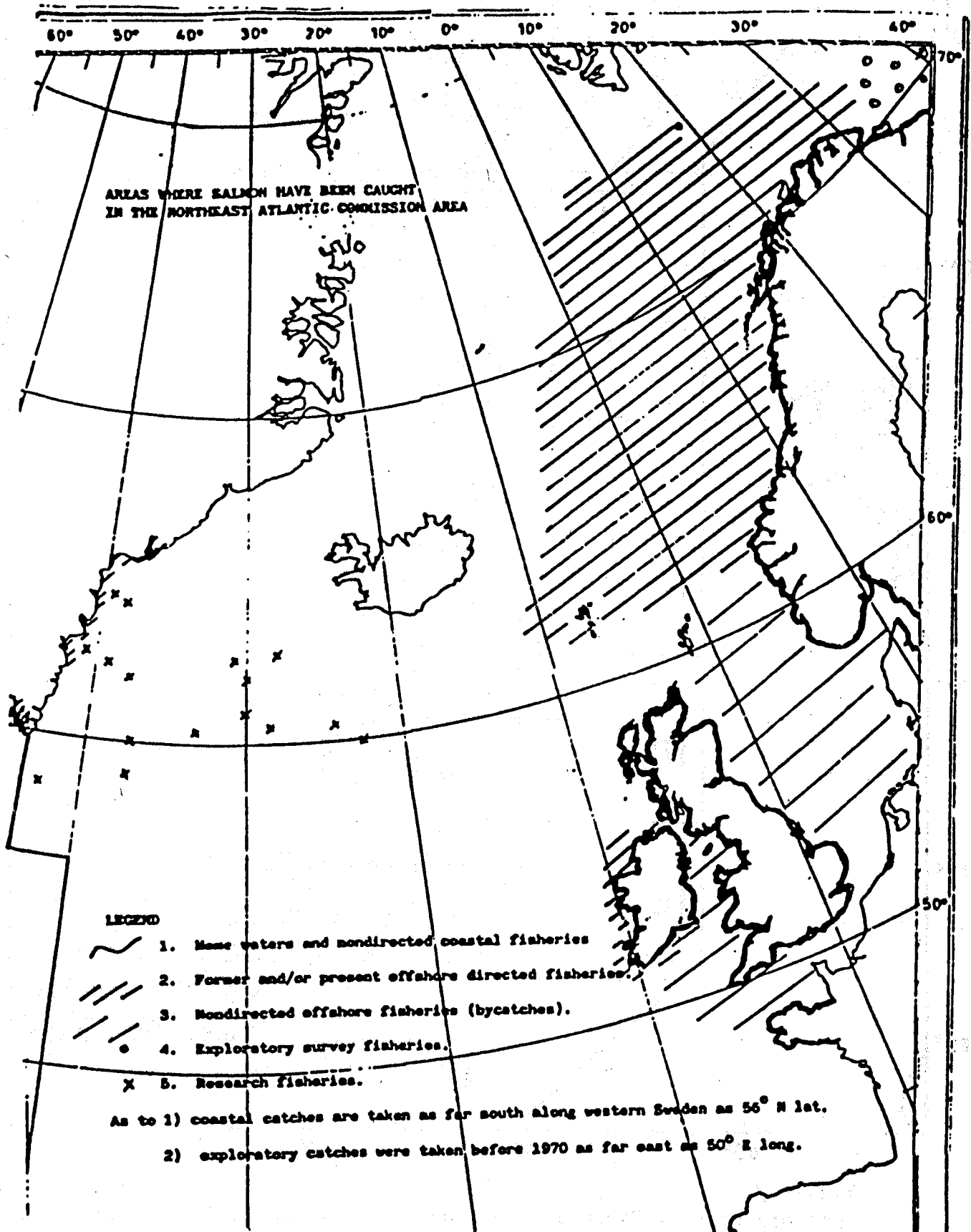


Figure 1

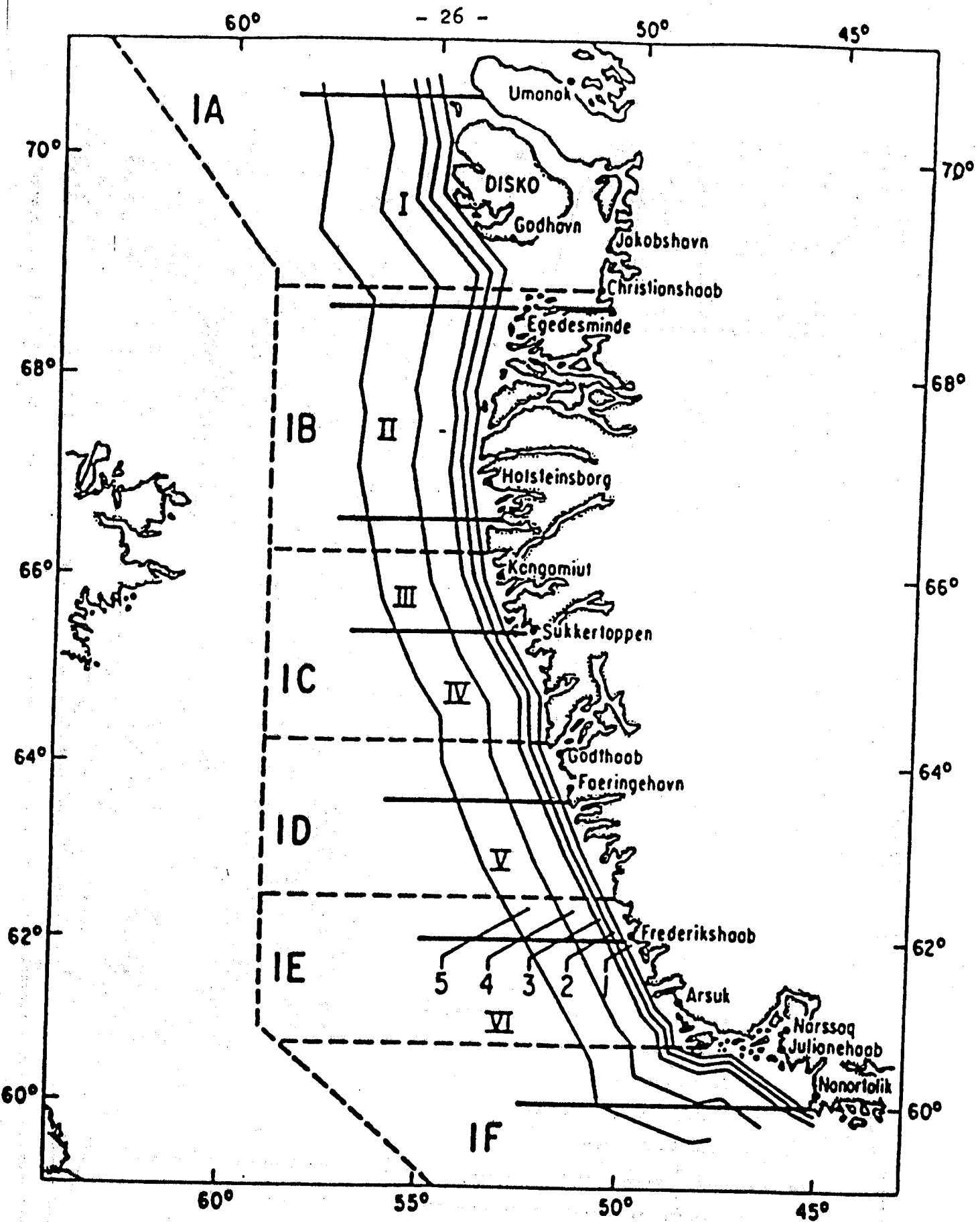


Figure 2

Area map of West Greenland showing NAFO divisions, fishing areas (I-VI), and subareas (1-5).

PROPOSAL

Request to ICES for advice with relevance to possible recommendations concerning fishing on salmon stocks subject to the North East Atlantic Commission

=====

1. (a) Assess the exploitation and the fishing mortality exerted upon the salmon stocks which migrate in the NEA Commission area, divided between the following fisheries :
 - (i) home water fisheries (as far as possible, divided between river fisheries and sea fisheries inside 12 miles)
 - (ii) sea fisheries outside 12 miles.
 - (b) Consider options for total catches for the salmon inside safe biological limits for 1985.
 - (c) Specify deficiencies in data pertaining to subparagraphs (a) and (b) and advise on additional data and sampling programmes required to increase the accuracy of the assessments.
2. In order to enable the Commission to consider the factors referred to in Article 9 of the Convention when proposing regulatory measures, in particular subparagraphs (d) and (e), ICES is requested to :
- (a) assess the distribution of salmon stocks throughout the NEA Commission area,
 - (b) assess the salmon biomass in the fisheries zone of the Faroe Islands and estimate the average weight gained and the feed consumed by salmon in this area,
 - (c) assess the relative effects of harvesting salmon at different stages of their migration routes,
 - (d) specify deficiencies in data pertaining to subparagraphs (a), (b) and (c) and sampling programmes required in order to obtain such accuracy.
-

DRAFT REQUEST BY NASCO - WEST GREENLAND COMMISSION -
FOR SCIENTIFIC ADVICE FROM ICES
=====

ICES is requested to describe, explain and interpret events in the West Greenland Atlantic salmon fishery in 1982 and 1983 so as to furnish a scientific basis for the consideration of management measures by the Commission. Specifically, ICES is requested to :

- 1) Describe events in the West Greenland fishery in 1982 and 1983 including regulations in effect, gear and vessels in use, temporal and geographical distribution of the fishery, and the quantity and composition of the catches by continent and, if possible, country of origin.
- 2) Explain the importance of various possible causal factors leading to the very low 1983 harvest of salmon at West Greenland and advise on the implications of this low harvest on returns of large salmon to home waters in 1984.
- 3) Advise on the effects of varying levels of harvest at Greenland on subsequent returns of large salmon to home waters.
- 4) Advise on the effects of varying levels of harvest in home waters on spawning stocks and subsequent smolt production.

ICES is also requested to advise whether and to what extent, the salmon fishery at the Faroes catches salmon which would otherwise subsequently be available to the West Greenland fishery.

Draft

Request by NASCO - North American Commission for
Scientific Advice (from I.C.E.S.)

I.C.E.S. is requested to describe historical fisheries of the parties to the Commission which have caught salmon originating in rivers or artificial production facilities of another party to the Commission. Specifically :

1. Estimation should be provided of the number, weight, age and sex composition of such salmon catches categorized seasonally, geographically and by gear type.
 2. The description of fisheries catching salmon originating in another parties river or artificial production facility should include catch, effort, gear type, season and the composition by species and age of annual historical catches.
-

NASCO (84)37
DECISION OF THE COUNCIL
TO
REQUEST SCIENTIFIC ADVICE FROM ICES

The Council decides to request the following scientific advice from ICES with relevance to possible recommendations concerning fishing on salmon stocks subject to the North-East Atlantic Commission.

- 1.(a) Assess the exploitation and the fishing mortality exerted upon the salmon stocks which migrate in the North-East Atlantic Commission area, divided between the following fisheries:
 - (i) home water fisheries (as far as possible, divided between river fisheries and sea fisheries inside 12 miles),
 - (ii) sea fisheries outside 12 miles.
 - (b) Consider options for total catches for the salmon inside safe biological limits for 1986.
 - (c) Specify deficiencies in data pertaining to sub-paragraphs (a) and (b) and advise on additional data and sampling programmes required to increase the accuracy of the assessments.
2. In order to enable the Commission to consider the factors referred to in Article 9 of the Convention when proposing regulatory measures, in particular sub-paragraphs (d) and (e), ICES is requested to:
- (a) assess the distribution of salmon stocks throughout the North-East Atlantic Commission area,
 - (b) assess the salmon biomass in the fisheries zone of the Faroes Islands and estimate the average weight gained and the feed consumed by salmon in this area,

- (c) assess the relative effects of harvesting salmon at different stages of their migration routes,
- (d) specify deficiencies in data pertaining to sub-paragraphs (a), (b) and (c) and sampling programmes required in order to obtain such accuracy.

The Council decides to request the following scientific advice from ICES with relevance to possible recommendations concerning fishing on salmon stocks subject to the West Greenland Commission.

ICES is requested to describe, explain and interpret events in the West Greenland Atlantic salmon fishery in 1984 so as to furnish a scientific basis for the consideration of management measures by the Commission. Specifically ICES is requested to:

1. Describe events in the West Greenland fishery in 1984 including regulations in effect, gear and vessels in use, temporal and geographical distribution of the fishery, and the quantity and composition of the catches by continent and, if possible, country of origin.
2. Advise on the effects of varying levels of harvest at Greenland on subsequent returns of large salmon to home waters.

The Council decides to request the following scientific advice from ICES with relevance to possible recommendations concerning fishing on salmon stocks subject to the North American Commission.

ICES is requested to describe historical fisheries (together with relevant regulatory measures) of the members of the Commission which have caught salmon originating in rivers or artificial production facilities of another party to the Convention. Specifically:

1. Estimates should be provided of the number, weight, age and sex composition and river of origin of such salmon catches,

categorized seasonally, geographically and by gear type. These estimates should take into consideration available information on the release and recovery of tagged salmon and on catches and exploitation rates for salmon in areas where such catches occur.

2. The description of fisheries catching salmon originating in another party's river or artificial production facility should include catch, effort, gear type, season and the composition by species, age and sex of annual historical catches.
3. Data deficiencies and research programmes required to meet the needs of the North American Commission for scientific information on salmon stocks and fisheries should be identified.

NASCO (84)38
DECISION OF THE COUNCIL
ON
NASCO RESEARCH REQUIREMENTS WITH PRIORITIES

1. The Council decides on the following research requirements:
 - 1.1 Effective conservation, restoration and enhancement of North Atlantic salmon stocks require the establishment and maintenance of a scientific information base and the better understanding of mechanisms whereby natural factors and human interventions affect salmon stocks. The Council recognises the vital role of coordination of research and compilation of data which could be played by ICES. The following programmes of research are considered essential for NASCO to meet its objectives:
 - 1.1(1) A systematic programme should be undertaken to monitor all North Atlantic salmon fisheries. Biological samples of catches should be taken in addition to the compilation of statistics of catch, fishing effort, exploitation rates, non-catch fishing mortality*, fishing gear and seasons.
 - 1.1(2) A statistical data base of catch, fishing effort, seasons and fishing gear, together with artificial smolt production, mark and recapture data and biological sampling information should be developed.
 - 1.1(3) Research should continue on the identification of the location of origin of salmon. These studies should aim to improve scientific methodology, increase knowledge of salmon migration and provide estimates of total stock production.

NOTE: *Non-catch fishing mortality refers to fish mortalities generated directly or indirectly by fishing which is not included in recorded catches.

.../...

- 1.1(4) Specific rivers, some of which should include multi-sea-winter stock components, should be selected and monitored over a long period to provide information on annual smolt production, exploitation rates, geographical distributions of catches, wherever taken, adult returns and spawning escapement. Such monitoring should aim additionally to improve knowledge of factors influencing the salmon productivity of the freshwater habitat leading to improved estimates of optimal spawning levels and assessment of means to improve the productivity of salmon rivers.
- 1.1(5) A programme should be developed to define and study factors influencing the natural mortality and age at maturity of salmon in the sea with special emphasis on determining the extent and the causes of mortality in the months following the entry of smolts into the sea.
- 1.1(6) Further consideration will be given at the next meeting of the Council to the desirability of determining the geographical distribution of salmon throughout the marine phase and the terms and conditions under which such research might be conducted.

2. The following list represents the topics which NASCO sees as having top priority for immediate action by the Parties:

2.1 CATCH STATISTICS

These should include all removals from the stocks including recreational catches and estimates of illegal and non-reported catches. Monthly statistics on catch and effort by gear categories are also urgently required, especially in the West Greenland fishery.

2.2 SAMPLING

- 2.2(1) All fisheries should be sampled to provide information sea-age composition, weight, length, sex ratio and stage of maturity. Samples from mixed stock fisheries should

in addition be used to determine country of origin of the salmon caught. The database for discriminant analysis used to identify continent of origin of salmon caught at Greenland should be tested every two years beginning in 1985, and the test database should also be expanded to include scales from salmon from additional stocks known to contribute to the West Greenland fishery.

- 2.2(2) The annual commercial landings sampling programme at West Greenland should be expanded to include a sampling location in southern Greenland so that the commercial landings can be more uniformly sampled.
- 2.2(3) To enable assessments to be made of the salmon biomass in the fisheries zone of the Faroe Islands and estimates of the average weight gained and feed consumed in this area, data needs to be collected on abundance, duration of stay, size at time of arrival and departure, specific growth rates by sea-age class, feeding rates, food consumption and conversion rates throughout the Faroes fisheries zone and during the year.

3. RESEARCH PROJECTS

- 3.1 These are required to study post smolt mortality and its causes and to estimate recruitment to the exploited phase, non-catch fishing mortality in all fisheries, ratios of weight of each sea-age class in home waters to the mean weight at Faroes, proportions of each sea-age class returning in the same and subsequent years and the survival rates of each sea-age class between Faroes and home waters. It is anticipated that on the last three items little information could be made available in the near future.

NASCO (84)39
PRESS RELEASE

During this week a new international organization has held its first annual meeting in Edinburgh: the North Atlantic Salmon Conservation Organization (NASCO). Originating from a salmon symposium held in Edinburgh six years ago and a diplomatic conference in Reykjavik in January 1982, the Convention setting up this organization came into force in October 1983. The President of its Council is Mr Gudmundur Eiriksson of Iceland and the Vice-President is Mr Allen Peterson Jr of the USA. The Parties are Canada, EEC, Faroes (Denmark), Finland, Iceland, Norway, Sweden and the USA. This first annual meeting was opened by the President of the Council at the George Hotel, Edinburgh on 22 May.

The purpose of NASCO is to promote the conservation, restoration, enhancement and rational management of salmon stocks in the North Atlantic Ocean by means of international cooperation. NASCO also provides for the acquisition, analysis and dissemination of scientific information pertaining to these stocks.

During this first meeting of the Council and its three Regional Commissions - the North American Commission (NAC), the North-East Atlantic Commission (NEAC) and the West Greenland Commission (WGC) - the organization considered scientific advice which has been received from the International Council for the Exploration of the Sea (ICES). Proposals on regulatory measures were adopted in the NEAC. The WGC recessed before completing its deliberations on regulatory measures. The NAC will consider regulatory measures at its February meeting in North America. The Council decided to request further scientific advice from ICES.

The Council appointed Dr Malcolm Windsor, a British scientist, as the Secretary of the organization.

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Spain and the USSR participated as observers in the meeting.

Councillor Campbell hosted a reception for the delegates on behalf of the Convenor of the City Council of Edinburgh.

The next annual meeting of the Council and Regional Commissions is to be held in Edinburgh in June 1985.

LIST OF DOCUMENTS

COUNCIL DOCUMENTS

- NASCO (84)4 - Scientific advice from ICES (Annex 13)
- NASCO (84)30 - Agenda of Council Meeting (Annex 3)
- NASCO (84)31 - Decision of the Council on amendments to the Staff Rules of NASCO (Annex 7)
- NASCO (84)32 - Decision of the Council on Staff Rule 6.5 and Financial Rule 9.1(e) (Annex 8)
- NASCO (84)33 - Decision of the Council on amendments to the Financial Rules of NASCO (Annex 9)
- NASCO (84)34 - Decision of the Council on authorising the Secretary to enter into contractual arrangements on behalf of NASCO with respect to accommodation for the organization (Annex 10)
- NASCO (84)35 - Decision of the Council on the appointment of Secretary (Annex 11)
- NASCO (84)36 - 1985 budget, 1986 forecast budget, 1984 revised contributions (Annex 12)
- NASCO (84)37 - Decision of the Council on scientific advice from ICES (Annex 14)
- NASCO (84)38 - Decision of the Council on NASCO research requirements with priorities (Annex 15)
- NASCO (84)39 - Press release (Annex 16)
- NASCO (84)40 - Report of Council
- FAC (84)15 - Report of the meeting of the Finance and Administration Committee (Annex 6)

OTHER DOCUMENTS

List of participants (Annex 1)

Opening statement made by the Head of the Delegation from Finland (Annex 2)

Statement made by the observer from the USSR (Annex 4)

Requests for participation as observers by non-government organisations (Annex 5)