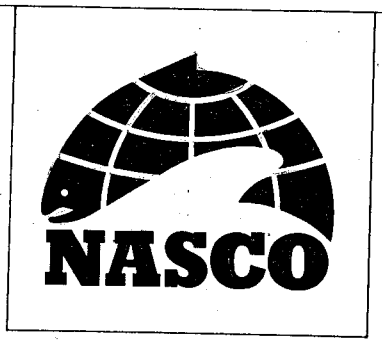
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD

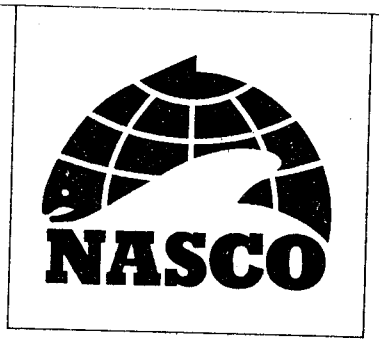


REPORT OF THE THIRD ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION

5-6 February 1986
Quebec City, Canada

23-27 June 1986
Edinburgh, UK

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



NORTH AMERICAN COMMISSION

COMMISSION NORD-AMERICAINE

CHAIRMAN	DR GEORGES NADEAU (CANADA)
RAPPORTEUR	MR TED LILLESTOLEN (USA)
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17.11.86
EDINBURGH

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)17

REPORT OF THE THIRD ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION

NAC (86)17

REPORT OF THE THIRD ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION OF THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION 5-6 FEBRUARY 1986, CONCORDE HOTEL, QUEBEC CITY, CANADA AND 23-27 JUNE 1986, SHERATON HOTEL, EDINBURGH, UK.

1. OPENING OF THE MEETING

1.1 The meeting was opened on 5 February 1986 by Dr Georges Nadeau, Chairman of the North American Commission. Opening statements were made by the representative of Canada, the representative of the US, the representative of the European Community (EC) (Annex 1) and the representative of Denmark in respect of the Faroe Islands and Greenland.

1.2 The list of participants is given in Annex 2.

2. ADOPTION OF THE AGENDA

2.1 The Commission adopted the agenda, after adding one item to the draft agenda. The agenda item added was "Election of Officers" which became agenda item no. 5.

2.2 The agenda is attached, NAC (86)4, (Annex 3)

2.3 With respect to item 9, the Commission directed the scientists of the US and Canadian delegations to develop the recommendations for scientific research and advice that would be considered by the Commission.

3. NOMINATION OF A RAPPORTEUR

3.1 The Commission nominated Mr Ted I Lillestolen (US) as rapporteur for the meeting.

4. APPROVAL OF REPORT OF THE LAST MEETING

4.1 The Commission approved the Report of the Second Annual Meeting, including the meeting held in Boston, USA, on February 21-22, 1985 and in Edinburgh, UK, on June 3-7, 1985.

5. ELECTION OF OFFICERS

5.1 Dr Frank Carlton of the United States was nominated and elected as the Chairman of the Commission.

5.2 Dr Georges Nadeau of Canada was nominated and elected as the Vice-Chairman of the Commission.

6. REVIEW OF THE 1985 FISHERY

6.1 The Canadian representative reviewed the 1985 Canadian Atlantic Salmon Management Plan and provided a document detailing the plan, NAC (86)5, (Annex 4).

6.2 The total 1985 Canadian Atlantic Salmon Catch was 1,100 metric tons (mt), which is 48.3% below the previous 20 year mean (2,128.5 mt) and 41.8% below the previous 5 year mean (1,890.23 mt). Attached, NAC (86)6, (Annex 5), are tables of the Canadian catch statistics dating back to 1960, 1985 nominal catches (provisional) for the Atlantic Salmon, a comparison of the overall 1983, 1984 and 1985 Atlantic Salmon Fisheries and a table on the impacts of the 1984 and 1985 Canadian Salmon Management Plans on MSW salmon.

6.3 The Canadian representative also provided a document prepared by the Canadian Atlantic Fisheries Scientific Advisory Committee on the status of Atlantic Salmon stocks in Canada, NAC (86)7, (Annex 6).

6.4 The US representative reviewed the 1985 United States catch statistics which involved only recreational rod and reel fishing. The total catch in Maine was 576 fish, a 10% reduction from the 1984 catch. The US representative also noted that in 1985 over 2.5 million smolts, fry and parr were released in US rivers. A table was provided on the 1985 New England Salmon Program, NAC (86)8, (Annex 7).

7. ACFM REPORT FROM ICES

7.1 At the February 1986 meeting the ICES representative, Chairman of the ACFM Committee, presented the scientific advice from ICES, NAC (86)3, (Annex 8) and the Report of the meeting of the Working Group on North Atlantic Salmon at Woods Hole, Massachusetts, 16-20 September 1985.

7.2 At the June 1986 meeting the ICES representative, Chairman of the ACFM Committee, presented the scientific advice from ICES, NAC (86)18, (Annex 9) and the Report of the meeting of the Working Group on North Atlantic Salmon held at Copenhagen, 17-26 March 1986.

8. REVIEW AND DISCUSSION OF PROPOSED 1986 CANADIAN AND US SALMON MANAGEMENT MEASURES AS THEY RELATE TO THE MANDATE OF THE COMMISSION AND TO THE FINDINGS OF THE ACFM REPORT FROM ICES, NAC (86)3

8.1 The US representative noted that the United States remains committed to its salmon restoration program. With respect to catch regulations, the US representative noted that the regulations currently in place will continue and include one fish per season on the Penobscot River, five fish per season on the other Maine rivers. On the St Croix River large salmon cannot be retained.

8.2 The US representative also noted that the New England Fishery Management Council is developing a plan to address Atlantic salmon management between three nautical miles (NM) and 12 NM. Management authority of the states extends to 3 NM and the Convention prohibits fishing of salmon beyond 12 NM.

8.3 The Canadian representative reviewed the 1984 and 1985 Canadian management measures and noted that the 1986 measures would probably include a number of the same components. The Canadian representative noted that Canada will continue in the same direction of salmon management as established in 1984 and 1985. The Canadian representative noted that the Atlantic Salmon Board, which has the responsibility of advising on the salmon management plan, would shortly be meeting to consider the proposed final plan.

8.4 The Canadian representative further noted that the Atlantic Salmon Board reviewed the international aspects of the Canadian management measures and strongly recommended that efforts be made to reduce the West Greenland fishery. The Board also suggested that in the light of the severe management measures currently imposed on Canadian fishermen, it would be very difficult for additional management measures to be adopted, particularly those measures proposed by the United States. The Canadian representative stated that Canada believed that the current management measures had had a beneficial effect by reducing the interceptions of US origin salmon by 11% to 40%.

8.5 The US representative recognized the efforts made by Canada in managing its salmon, but noted that the measures do not specifically address salmon of US origin. The US representative also recognized that the Canadian measures do reduce the interception of US salmon by 11 % as reported in the ICES report, but any estimates greater than 11% are speculative. The higher percentage noted by Canada includes the 31% which is attributed to reduced licensed fishing effort. The

ICES report states that the reduction in catch and the interception attributed to reduced licensed fishing effort could not be quantified.

8.6 The US representative referred to Article 7, section 1(b) of the Convention and noted that it is up to the NAC to "propose regulatory measures for salmon fisheries under the jurisdiction of a member which harvests amounts of salmon significant to the other member in whose rivers that salmon originates, in order to minimize such harvests." The US representative stated that the United States does not feel that 11% is significant, especially if one considers that approximately 40% of the total US run size is harvested in the east Newfoundland fishery. The US representative also noted that as provided for in Article 7 of the Convention, the NAC is to be a forum to discuss salmon conservation and management, however, to date Canada has not given the United States an opportunity to provide its input in Canada's management plan which addresses the interception of US salmon.

8.7 The Canadian representative recognized Article 7 of the Convention, and noted that Canada had been addressing the problem of interception of salmon of US origin. He further noted that the United States must also recognize Article 9(g) which addresses NASCO's obligation to take into account those communities which are particularly dependent on salmon fisheries, and stated that any further action taken by Canada with respect to the Labrador salmon fisheries would have a severe impact on those communities.

8.8 At the February meeting the Canadian representative proposed that, in the light of ICES inability to quantify the relationship between reduced catch and reduced licensed fishing effort, further discussion on this item be deferred until the NASCO meeting in June. This would allow the ICES Working Group scheduled to meet in March, an opportunity to address this issue.

8.9 The US representative rejected the Canadian proposal and stated that the data available was sufficient to address the problem of interception of US salmon and reiterated the US position that the United States should not lose more salmon to interception than any of the other parties to the Convention. The US representative noted that the US proposal submitted last year would not severely affect the Newfoundland and Labrador Salmon fishery and would in effect reduce interception of US salmon to a level comparable to the interception of Canadian salmon in the West Greenland fishery. Canada had rejected the US proposal because of the inability of the West Greenland Commission to adopt management measures. The US representative stated that the Convention is designed to deal with salmon in three areas and the actions in one Commission should not be linked with actions in another Commission.

8.10 The US representative further stated that it was not the intention of the United States to tell Canada how to manage its salmon fisheries, but the United States would wish to have the opportunity to discuss with Canada within this Commission the various management options which affect salmon of US origin.

8.11 The US representative resubmitted the 1985 management proposal, which included the closure of the 1986 fall fishery (September 1 through December 31) in all of Newfoundland and Labrador.

8.12 The Canadian representative reiterated the significant management measures adopted by Canada to address the conservation of Atlantic Salmon which have affected both Canada and the US. The Canadian representative would, however, be prepared to review and consider the US proposal.

8.13 In response to the US proposal the Canadian representative noted that the socio-economic impact on the affected communities would be quite severe. However, Canada recognises its international obligation to reduce the interception of US origin salmon and noted that, as part of its domestic regulations, the Newfoundland fishery will be closed from October 15, and submitted this action as a counter proposal to the NAC

8.14 Connected with this counter-proposal, the Canadian representative requested formal recognition by the US that the action to be taken by Canada would reduce the interception of US origin salmon by as much as 58%. This figure is based on adding 19.7%, which is the predicted level that will be realised by closing the fishery in Newfoundland on October 15, to 11%, which is the calculated figure resulting from the Canadian management measures currently in effect, (2% for Newfoundland and 9% for the Maritimes), to 28%, which is the figure estimated to be the maximum impact due to effort reduction, (31% was the figure found in the ICES report for the impact for all of Canada).

8.15 The US representative expressed disappointment that Canada did not impose the Newfoundland seasonal closure from September 1, however, he further stated that the Canadian counter-proposal will have a definite impact on reducing the Canadian interception of US salmon. The US representative also recognised that the additional management measures implemented by Canada will affect various Canadian communities.

8.16 The US representative finally recognised that the action that will be taken by Canada with respect to the October 15 closure in Newfoundland complemented with the other area closures and delayed season, would total approximately a 30% reduction in the interception of US salmon. With respect to the impact due to effort reduction, the US representative also recognised that it would have an impact but noted, as did the ICES report, that this could not be quantified.

8.17 The US representative did state that the Canadian counter proposal is the first substantive regulatory action that has been considered in the Commission and marks a forward step in NASCO. The US representative also recognised that this action expresses the Canadian recognition of its international obligation to reduce its interception of US salmon.

8.18 The Commission adopted as a regulation the counter proposal submitted by Canada which included the October 15 closure of the Newfoundland fishery.

NOTE: The text of the regulation of the North American Commission of NASCO (contained in the telex issued by the Secretary on 31 July 1986) is shown in Annex 10 of this report.

9. RECOMMENDATIONS TO THE COUNCIL CONCERNING REQUESTS TO ICES FOR SCIENTIFIC RESEARCH AND SCIENTIFIC ADVICE

9.1 The Commission agreed to review and address the draft questions from NASCO to ICES prepared by the US and Canadian scientists at the NASCO meeting in June, NAC (86)9.

9.2 The Commission reviewed and accepted a document 'Questions from NASCO to ICES, June, 1986, NAC (86)14, (Annex 11) and agreed to forward it to the Council for proper action.

10. REPORT OF THE WORKING GROUP ON STOCKING OF THE GREAT LAKES AND THE ATLANTIC SEABOARD WITH PACIFIC SALMONIDS

10.1 The Commission reviewed the report of the Working Group on the introduction of new salmonids on the Atlantic seaboard and it was agreed that the issue requires further study.

10.2 The Canadian representative submitted suggested terms of reference for a NASCO Bilateral Scientific Working Group on salmonid introductions and transfers NAC (86)10 which address those areas needing further study.

10.3 The Commission adopted terms of reference for the Working Group, NAC (86)15, (Annex 12). It was agreed that the Group would consist of 2 or 3 individuals from Canada and the United States, the names of the individuals would be provided following the meeting.

It was further agreed that the Working Group would meet at least once prior to the February 1987 NAC meeting and would prepare a progress report for the NAC meeting specially on the following:

(i) A thorough review of the previous report to the NAC.

(ii) A review of all non-indigenous salmonid introductions (undertaken in 1986 or proposed for 1987) in relation to the ICES revised Code of Practice (terms of reference 3).

(iii) The development of an inventory (terms of reference 5).

11. EFFECTS OF ACID RAIN

11.1 The Canadian representative noted that the United States had not yet responded to the 1985 Canadian proposal (NAC (85)23) to establish a joint working group to review the effects of acid rain on Atlantic salmon. The Canadian representative noted US concern regarding item 4 of the proposal and suggested that the original proposal be modified to delete item 4. The Canadian representative further suggested that the proposal be further modified to include ICES in the review process.

11.2 The US representative reacted positively to the Canadian proposed changes and the proposal as modified, NAC (86)16, (Annex 13) was adopted by the Commission and it was agreed that it would be referred to ICES.

12. DATE AND PLACE OF NEXT MEETING

12.1 The US representative requested the Executive Secretary to review and provide clarification on the designation of the February and June meetings of the NAC. The Secretary reported to the Commission on this question and it was agreed that the meetings held in February would be convened by the President of NASCO and be designated the Annual Meeting which would continue in June.

12.2 The US representative issued an invitation to host the next meeting of the Commission in Miami, Florida from February 25-27, 1987 and the Commission accepted this invitation.

13. OTHER BUSINESS

13.1 The US representative proposed that NASCO consider requesting advice from ICES on an expanded tagging program. This proposal had been submitted by the United States to ICES but was not accepted at the meeting of the Anadromous and Catadromous Committee in 1985.

13.2 The Canadian representative requested that the US provide Canada with the specific proposal and indicated that they would be willing to address the issue.

14. CONSIDERATION OF THE DRAFT REPORT OF THE MEETING

14.1 The Commission agreed that the draft report would be circulated to the Chairman and heads of delegations by mail.

15. ADOPTION OF PRESS RELEASE

15.1 The Commission agreed to issue press related information in the Council press release.

QUEBEC CITY
5 FEBRUARY 1986

ANNEX 1

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

OPENING STATEMENT BY THE REPRESENTATIVE OF
THE EUROPEAN COMMUNITY

The European Community greatly welcomes the opportunity of assisting at the Third Annual Meeting of the North American Commission of NASCO and it particularly congratulates the Chairman on the choice of the historical and beautiful city of Quebec as the location for this meeting.

The Community wishes to underline that it maintains the position it has outlined at the previous NAC meetings with regard to its rights of participation in the deliberations of the NAC. However, since no decision has yet been reached by the NASCO Council following the establishment of the Working Group in June 1985, the Community does not intend raising the matter at this meeting.

Following the disappointing lack of progress at the Second Annual Meeting of NASCO in June 1985 where regulatory measures were not adopted by any of the three regional Commissions, the Community considers it essential that we commence the work of NASCO in 1986 in a positive and constructive manner. The Community will therefore listen with great interest to the progress achieved at this meeting of the North American Commission with the above objective in mind.

ANNEX 2

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
THIRD ANNUAL MEETING OF THE
NORTH AMERICAN COMMISSION
5-6 FEBRUARY 1986, CONCORDE HOTEL, QUEBEC CITY, CANADA
23-27 JUNE 1986, SHERATON HOTEL, EDINBURGH, UK.

LIST OF PARTICIPANTS

*Denotes Head of Delegation

CANADA

*MR W ROWAT	Representative Atlantic Fisheries Service, Government of Canada, Ottawa, Ontario
DR G NADEAU	Representative Faculte des Sciences de l'Education, Universite Laval, Quebec
MR E McCURDY	Representative Newfoundland Fishermen, Food and Allied Workers Union, St John's, Newfoundland
DR W M CARTER	Atlantic Salmon Federation, St Andrews, New Brunswick
DR W G DOUBLEDAY	Dept of Fisheries and Oceans, Ottawa, Ontario
MR D MEERBURG	Department of Fisheries and Oceans, Ottawa , Ontario
MR B MUISE	Nova Scotia Department of Fisheries, Musquodoboit Harbour, Nova Scotia
MR I L BRUCE	Department of External Affairs, Ottawa, Ontario
MR B JONES	Department of Fisheries, Fredericton, New Brunswick
MR B VEZINA	Department of Fisheries and Oceans, Ottawa, Ontario
MR H W GOUDIE	Department of Fisheries, Newfoundland & Labrador, Mount Pearl, Newfoundland
MR D A MacLEAN	Department of Fisheries, Halifax, Nova Scotia

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
MR T I LILLESTOLEN	National Marine Fisheries, NOAA, Washington DC
MR S APOLLONIO	Department of Marine Resources, Augusta, Maine
MR D A REIFSNYDER	Office of Fisheries Affairs, Department of State, Washington DC
MR J H KUTKUHN	US Fish and Wildlife Service, Department of the Interior, Washington, DC
MR V C ANTHONY	National Marine Fisheries Service, Woods Hole, Mass
DR P GOODYEAR	US Fish and Wildlife Service, Department of the Interior, Kearneysville, West Virginia
MR A W NEILL	National Marine Fisheries Service, Woods Hole, Mass
MR A L MEISTER	Atlantic Salmon Commission Bangor, Maine
MR R A JONES	Connecticut Bureau of Fisheries, Hartford, Connecticut
MR J E WEAVER	US Fish and Wildlife Service, Boston, Mass
MR J DENTLER	US House of Representatives Committee on Merchant Marine Fisheries, Washington DC
MR E W SPURR	New England Fishery Management Council, Concord, New Hampshire
MR G RADONSKI	Sports Fishing Institute, Washington DC
MR H LYMAN	Salt Water Sportsman Inc, Boston, Mass
MR G MANUEL	Atlantic Sea Run Salmon Commission, Augusta, Maine

EEC(+)

MR E J SPENCER	Representative Fisheries Directorate-General, EEC, Brussels
MISS E TWOMEY	Department of Tourism, Fisheries and Forestry, Dublin
DR R G SHELTON	Department of Agriculture and Fisheries for Scotland, Pitlochry

OBSERVERS

DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)

MR J MOELLER-JENSEN	Greenland Fisheries and Enviromnent Research Institute, Copenhagen

ICES

MR B B PARRISH	International Council for the Exploration of the Sea, Copenhagen
MR O ULLTANG	Institute of Marine Research, Bergen

SECRETARIAT

DR M L WINDSOR	Secretary NASCO
DR P HUTCHINSON	Assistant Secretary, NASCO

(+) NOTE 1: Under Article 11, paragraph 2 of the Convention for the Conservation of Salmon in the North Atlantic Ocean the EEC has the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in the territories referred to in article 18 of the same Convention.

NOTE 2: Not all participants were present at both the Quebec City and the Edinburgh meetings.

ANNEX 3

5 FEBRUARY 1986
QUEBEC CITY

NAC (86)4

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
THIRD ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION
5-6 FEBRUARY 1986, CONCORDE HOTEL, QUEBEC CITY, CANADA
23-27 JUNE 1986, SHERATON HOTEL, EDINBURGH, UK.

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Nomination of a rapporteur
4. Approval of report of last meeting
5. Election of Officers
6. Review of the 1985 fishery
7. ACFM report from ICES on salmon stocks, NAC (86)3 - 'Salmon in the North American Commission areas'
8. Review and discussion of proposed 1986 Canadian and US salmon management measures as they relate to the mandate of the Commission and to the findings of the ACFM Report from ICES, NAC (86)3
9. Recommendations to the Council concerning request to ICES for scientific research and scientific advice
10. Report of Working Group on stocking of Great Lakes and Atlantic seaboard with Pacific salmonids
11. Effects of acid rain on Atlantic salmon
12. Date and place of next meeting
13. Other business
14. Consideration of draft report of meeting
15. Adoption of press release

FEBRUARY 1986
QUEBEC CITY

ANNEX 4

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC(86)5

1985 ATLANTIC SALMON MANAGEMENT PLAN

1985 ATLANTIC SALMON MANAGEMENT PLAN

Guiding Principles and Major Elements

Atlantic Fisheries Service
Department of Fisheries and Oceans
May 1985

Published by:

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Fisheries and Oceans
Ottawa, Ontario
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DFO/2420

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Annexes

1985 ATLANTIC SALMON MANAGEMENT PLAN

The 1985 Atlantic Salmon Management Plan is guided by the principles adopted by the Department of Fisheries and Oceans through consultations with the Atlantic Salmon Advisory Board. It incorporates the three Regional Atlantic Salmon Management Plans which are developed in consultation with Regional Zone Management Advisory Committees. In addition, representations from other interested associations and organizations were taken into consideration.

Principles

1. Conservation of Atlantic salmon stocks, particularly the large salmon component.

2. Access to all Atlantic salmon stocks will be regulated by all or a combination of the following: seasons, quotas, gear and licensing restrictions.

3. Allocation of Atlantic salmon stocks will be made by Management Zones and/or river system and according to interests and/or dependence of user groups and that of industries and communities deriving benefit from the harvestable resource.

4. Interception of migrating salmon in mixed-stock fisheries will be minimized where practical and feasible, by adjusting seasons, gear and area of fishing.

5. Recreational fishing opportunities and benefits will be maximized within the constraints of allowable catch.

6. Harvesting of salmon by commercial fishing gear not licensed for salmon will be minimized by adjusting seasons, gear and area of fishing, and the retention of salmon caught under these circumstances will be illegal.

7. Atlantic salmon enhancement plans will be developed in concert with Atlantic Salmon Management Plans.

8. Atlantic salmon habitat will be protected and improved to allow for maximum stock production.

9. The practice of tagging salmon catches will be encouraged and expanded.

10. The social and cultural importance of fishing to Indian communities will be recognized where they have traditionally harvested the resource.

1985 ATLANTIC SALMON MANAGEMENT PLAN

Major Elements

1. The opening of the 1985 commercial fishing seasons for the province of Newfoundland and Labrador will remain as in 1984. The fishing seasons will be:

   Zones 1N-2N (Labrador), 3N-10N, 11N (east), 14G: June 5/December 31.

   Zone 13G and that portion of Zone 11N lying between Pass Island and Fox Point: June 5/July 10.

   Zone 12G and that portion of Zone 11N lying between Fox Point to Cinq Cerf Bay: Closed.

   All commercial salmon licences held by part-time fishermen in Newfoundland and Labrador will be cancelled and a buy-back program will be offered.

   All other existing regulations and weekend closures will apply.

2. The commercial salmon fisheries in the Maritime Provinces will be closed for 1985.

New Brunswick

Zone 1	Restigouche:	Closed
Zone 2	Miramichi:	Closed
Zone 3	St. John (Southern N.B.):	Closed

Prince Edward Island

Zone 4	St. Peter's Bay:	Closed
	Gulf Shore:	Closed

Nova Scotia

Zone 5	Cape Breton East:	Closed
Zone 6	Gulf Shore of Nova Scotia:	Closed
Zone 7	Eastern Shore:	Closed
Zone 8	Upper Bay of Fundy (Nova Scotia side)	Closed
Zone 9	South West N.S.:	Closed

Eligible Maritime commercial fishermen will each be offered $4,000 in 1985 in lieu of fishing to compensate for loss revenue. This payment would be considered as an up-front payment to any buy-back program that may be established.

3. There will be no new commercial salmon fishing licences issued on an Atlantic-wide basis.

4. Transfers of commercial fishing licences will be allowed in the Maritime Provinces and in Newfoundland and Labrador among immediate family members on the condition that the recipients are full-time fishermen.

5. Only the retention of grilse will be permitted in the recreational fisheries for the provinces of New Brunswick, PEI, Nova Scotia and Newfoundland (excluding Labrador). All multi-sea winter salmon (63cm and greater in length) hooked by anglers will be required to be released immediately with the least possible harm to the fish. The Province of Quebec will maintain this restriction for the bordering rivers within the Restigouche system as in 1984.

6. During 1985, the tagging system will be maintained in all Maritime Provinces. Additionally in Newfoundland and Labrador, salmon intended for export to other Atlantic Provinces will be required to be tagged before leaving the Province.

7. The seasonal bag limits along with the possession and daily limits in Nova Scotia, and New Brunswick will be maintained at 10, 6 and 2 respectively which will be required to be grilse. In P.E.I., the bag limits will remain at 5, 1, 1. Some consideration will be given to introduce seasonal bag limits in the Newfoundland and Labrador recreational fishery along with the expansion of the tagging program. All salmon that are hooked and then released will not have to be counted toward the seasonal or daily limits. However, fishermen will have to stop fishing for salmon once they have retained two fish.

8. Where possible recreational fishing seasons will be extended by two weeks in all Atlantic Provinces (excluding Quebec).

9. It will be illegal to retain, or be in possession of, salmon captured incidentally in non-salmon commercial gear. The Department of Fisheries and Oceans will review its priorities for inland and coastal enforcement to restrain any increase in poaching activity and to monitor other commercial fisheries which may be susceptible to incidental catches of Atlantic salmon.

10. Negotiations will continue with native groups to lower present fishing quotas, ensure the enforcement of regulations, and encourage the use of trap nets. In New Brunswick, the Indian Bands who participated in a food fishery in 1984 will be offered the choice to change their fishing gear to trapnets where feasible. Indian fisheries development projects will also be considered under the N.B. ERDA where these projects are deemed to be economically viable and directly contribute to conservation of fish stocks.

11. Development of programs to expand efforts in the enhancement of the Atlantic salmon resource will be continued and implemented as funding becomes available.

12. The Department of Fisheries and Oceans will maintain its commitment to continue to seek further reductions in the quota for the West Greenland commercial salmon fishery.

1985 ATLANTIC SALMON MANAGEMENT PLAN

Regional Management Measures

A. LICENSING POLICIES

a) Scotia-Fundy and Gulf Regions (excluding Western Newfoundland and Labrador) -- Zones 1, 2, 3, 4, 5, 6, 7, 8, 9.

1. Commercial salmon fishermen will not be required to renew their licences in 1985. Commercial salmon fishermen will be offered $4,000 each to compensate for the closure of the fishery in 1985 . This payment will be considered as an up-front payment for a buy-back program that may be established in consultation with fishermen and the provinces.

2. Transfer of licences to another individual will not be permitted in 1985, except between immediate family members who are bona-fide or full-time fishermen. For purposes of this policy, immediate family members are husband/father, wife/mother, son/daughter and brother/sister.

3. Licences are not available for new entrants in this fishery.

4. Licences are only valid for the Management Zone specified.

b) Newfoundland Region and Western Newfoundland and Labrador Portion of Gulf Region -- Zones 1N-11N and 12G-14G.

1. In 1985, licences may be issued to those persons who, in 1984:

a) held commercial fishing licences; and

b) personally operated their specified commercial salmon fishing gear; and

c) were not employed full-time outside the commercial fishery or other primary industries for more than nine months annually; and

d) were and still are full-time residents of the Salmon Management Zone in which they fished unless otherwise specified.

Note: Participation in the 1985 salmon fishery will not be a prerequisite to be eligible for a salmon licence in 1986. However, all fishermen will be required to renew their salmon fishing licences and meet the criteria outlined in c) and d) above.

2. Licences are only valid for the Management Zone specified.

3. Transfer of licences to another individual will not be permitted in 1985, except between immediate family members who are full-time fishermen. For purposes of this policy, immediate family members are husband/father, wife/mother, son/daughter and brother/sister.

4. All commercial salmon licences held by part-time fishermen will be cancelled and a buy-back program will be offered in 1985.

5. Fishing effort limits for full-time fishermen will remain at 200 fathoms per licence in 1985.

6. Licences are not available for new entrants in this fishery in 1985.

7. On application, the holder of a set-net licence (fixed gill net, trap net) may be permitted to move his gear to a new location provided it can be shown that circumstances have arisen which render the current location useless (i.e., wharf construction, dredging) and provided further that the new location will not adversely affect the fishery and/or salmon fishing set-net licences presently located in the area.

B. **MEASURES TO PREVENT ATLANTIC SALMON BY-CATCH IN NON-SALMON COMMERCIAL GEAR**

In all Atlantic provinces, it will be illegal to retain or be in possession of Atlantic Salmon caught by non-salmon commercial gear.

a) Provinces of New Brunswick, Nova Scotia and Prince Edward Island

1. Non-salmon commercial fishing gear includes all traps, weirs and gillnets used to fish for all finfish species.

2. All salmon caught incidentally in the above gear must be released immediately to the water.

3. In areas where the by-catch of salmon is significant, the commercial gear shall be re-located voluntarily and/or as instructed by a fishery officer.

b) Province of Newfoundland and Labrador

1. As in 1984, the incidental catch of salmon in traps and nets will be minimized by seasonal and area variations as required.

2. In cod traps, the seven inch (178 mm) mesh size for leaders and the prohibition of the use of monofilament will be strictly enforced. The top portion of groundfish gillnets has to be at least 3 m underneath the surface of the water. This depth will be brought to 5 m when the proposed regulation amendment is gazetted.

C. RECREATIONAL FISHERY

1. Size restrictions -- For the recreational fisheries Atlantic wide (excluding Labrador and most of Quebec), the retention of multi-sea winter salmon will be prohibited (salmon 63 cm or greater in length). However, anglers will be permitted to hook and release multi-sea winter salmon.

Regions will continue media programs in cooperation with anglers' associations to ensure anglers are aware of proper release methods in order to ensure that the fish are released with the least possible harm.

2. Bag limits -- In 1985, the bag limits will be:

	N.B.	N.S.	P.E.I.	Nfld. and Labrador*
Season	10	10	5	None
Possession	6	6	1	2-day limit
Daily	2	2	1	2

*In Labrador, anglers are allowed to retain large MSW salmon.

Anglers will be permitted to hook and release grilse and or large MSW-salmon which will not be counted against daily bag limits.

Bag limits which were previously restricted to lower levels because of specific conditions will be maintained as such.

Anglers exhausting these daily or seasonal limits will not be permitted to fish for Atlantic salmon for the remaining portion of the period associated with the limit reached.

3. Black salmon fishery -- The grilse only restriction will apply in 1985. The season will remain April 15 to May 15 in New Brunswick.

4. Season -- Where no major restrictions exist, seasons have been extended by two weeks. Extensions either at the beginning or at the end of the current season have been established on a river by river basis in consultation with provinces and angling interests.

D. TAGGING PROGRAM

In 1984, a tagging program was introduced into Prince Edward Island (and Quebec), and is similar to the ones in New Brunswick and Nova Scotia. In 1985, the tagging programs will be maintained in all of the Maritime Provinces. These programs are designed to minimize the illegal harvest and marketing of salmon. In addition the Gulf and Newfoundland Regions have initiated an export Tagging Program in the Province of Newfoundland and Labrador for the 1985 season. All salmon leaving Newfoundland and Labrador will be tagged.

Where applicable, all salmon caught by licensed salmon fishermen will be tagged by applying a self-locking, tamper-proof plastic tag through the mouth and gill cavity of the fish. Each tag number will be recorded with the licence number issued to the fisherman for immediate identification of all legally harvested salmon.

The tags will be colour coded for each fishery. **Blue tags** will be used for the licensed recreational salmon fishery; **red tags** for the licensed commercial salmon fishery; and **orange tags** (yellow in Quebec) for the licensed Indian food fishery. **Brown tags** (green in Quebec) must be applied to fish caught for scientific-research purposes and for fish farming operations. A **green tag** (white in Quebec) will be used for Atlantic salmon imported into New Brunswick, Nova Scotia, and Prince Edward Island from areas outside these provinces. A green export tag will be applied

to all salmon being exported from the Province of Newfoundland and Labrador. A **yellow tag** issued by Parks Canada will be used for salmon captured in waters within national parks.

E. ENFORCEMENT ACTIVITIES

Where feasible in 1985, emphasis will be placed on protection and conservation of Atlantic salmon in both the marine and freshwater environment. Particular attention will be directed to the following:

1. commercial salmon log record reporting (where applicable);

2. salmon by-catch restrictions;

3. poaching activity in inland waters;

4. fish habitat protection;

5. salmon tagging requirements;

6. strict observance of closed times and closed areas.

In the Western Newfoundland portion of the Gulf Region, the "Dial-a-Poacher" program will be continued in 1985. A toll-free number (ZENITH-07057) has been established, and phones will be manned twenty-four hours a day.

The Newfoundland Region is also continuing its "Report-a-Poacher". Individuals can report suspected illegal fishing activity by dialing the 24-hour manned toll free number (1-800-563-7277).

F. RESOURCE ENHANCEMENT

In 1985, enhancement projects will be maintained with the objective of expanding and increasing efficiency where possible. The Department will continue to investigate enhancement potential and upgrade fish ways.

There will be no new major enhancement projects undertaken in Atlantic Canada. However, many regional and community enhancement projects will commence in 1985 such as constructions of incubation boxes, stream clearance, investigation of enhancement potential and upgrading of fishway facilities.

G. INTERCEPTION

Measures previously introduced to reduce the interception of mainland salmon will be continued in 1985.

H. NATIVE FISHERY

Negotiations will be continued with Native groups to ensure their cooperation on conservation initiatives. Wherever possible, they will be encouraged to modify their fishing methods from gillnets to trapnets from which large salmon could be released. In New Brunswick, Native groups will be offered financial assistance to replace existing salmon gear with trapnets under federal funding from the New Brunswick ERDA. Their fishery will remain a food fishery only. Native Bands will be encouraged to identify alternative development opportunities to replace or reduce the salmon component within their food fishery requirements.

I. SURTAX ON RECREATIONAL FISHING PRIVILEGES

In 1985 negotiations will continue with all Atlantic Provincial Governments for the purpose of establishing and administering a fund that could be used to finance Atlantic salmon related projects such as buy-back programs, enhancement programs, surveys and enforcement activities. This fund could be established by an ongoing surtax on recreational fishing privileges administered by the provinces.

J. COMMERCIAL SALMON LICENCE BUYBACK PROGRAM

In 1985 the Department of Fisheries and Oceans has introduced buy-back programs for part-time commercial salmon fishermen in Newfoundland and Labrador. Fishermen will be paid the amount of $750. or the equivalent of 5 times the documented value of the best year of landings of the past three years to a maximum of $25,000.

A $4,000 compensation payment has also been offered to each salmon fisherman in all of the Maritime Provinces where the commercial salmon fisheries will be closed in 1985. This amount will be considered as an up-front payment toward a buy-back program that may be established in consultation with fishermen and the Provinces.

MANAGEMENT ZONES
ZONE I - RESTIGOUCHE RIVER SYSTEM

Commercial Fishery

Gear	Season
Trap nets	
- New Brunswick	- Closed
- Quebec	- No commercial fishery

1. Licensing

The Gulf Region Licensing Policy will apply.

2. By-catch

Further to imposing the restriction of no salmon by-catch throughout the Atlantic, regulations to eliminate this by-catch in non-salmon commercial gear will apply in Zone 1:

a) No person shall set or use any gillnet in those waters of the Chaleur Bay that are closed to gillnetting of any kind between June 8 to December 31 in any year.

b) Groundfish gillnets bait permits will be issued for 1985 in the waters of Bay of Chaleur, on a controlled basis only.

Recreational Fishery (Grilse Only)

Season bag limit - 10 fish
Possession limit - 6 fish
Daily bag limit - 2 fish

Seasons

River	Opening/Closing Dates
Bright Salmon	
Rivers in Zone 1 tributary to the Bay of Chaleurs with the following exceptions:	June 15 - Sept. 30
Benjamin	July 1 - October 15
Caraquet	July 1 - October 15
Charlo	July 1 - October 15
Jacket	July 1 - October 15

River	Opening/Closing Dates
Nepisiguit	June 8 - October 7
Pokemouche	July 1 - October 15
Restigouche System	June 1 - August 31
Tetagouche	July 1 - October 15
Tracadie	July 1 - October 15

Indian Fishery

In Zone 1, the following Indian bands will be authorized to conduct a food fishery under authority of a special licence:

Eel River Bar Indian Band

The terms and conditions of the special licence are subject to negotiation between the Department of Fisheries and Oceans and the Band Chief and Council. Negotiations are underway to redirect the salmon food-fishery from gillnets to trapnets.

ZONE 2 - MIRAMICHI RIVER

Commercial Fishery

Gear	Season
Trap Nets	- Closed
Drift Nets	- Closed

1. Licensing

The Gulf Region Licensing Policy will apply.

2. By-catch

General measures to eliminate Atlantic salmon by-catch in non-salmon commercial gear will apply. The following measures will also apply in Zone 2:

a) An area closure to groundfish gillnetting will apply to Canadian fisheries waters off the coast of New Brunswick west of a line beginning at Pointe à Barreau, Northumberland County, at 47°26'00"N latitude, 64°53'1"W longitude, thence to a point at 47°04'24"N latitude, 64°21'45"W

longitude, thence to a point on the shoreline of Kent County at 47°00'48"N latitude, 64°49'40" longitude.

b) An area closure to gillnetting of any kind will apply to those waters of the Miramichi Bay lying to the west of a line drawn from the lighthouse on Escuminac Point to a point at Pointe à Barreau at latitude 47°26'00"N. and longitude 64°53'12"W.

c) Groundfish gillnet bait permits will not be issued in 1985 for a bait fishery in the waters of the Miramichi Bay.

Recreational Fishery (Grilse Only)

Season bag limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish

Seasons

River	Opening/Closing Dates
Black Salmon	
Miramichi	April 15 - May 15
Bright Salmon	
Miramichi System, with the following exceptions	June 15 - Sept. 30
Bartholomew	Closed
Bartibog	July 1 - October 15
Buctouche	July 1 - October 15
Cains	July 1 - October 15
Cocagne	June 15- October 15
Dungarvin (above Underwood Brook)	June 8 - Sept. 15
Little Southwest Miramichi (above Catamaran Brook)	June 8 - Sept. 15
Main Southwest Miramichi (above McKeil Brook)	June 8 - Sept. 15
Northwest Miramichi (above Little river)	June 1 - August 31

Renous	
(above North Renous)	June 8 - Sept. 15
Rocky Brook	June 1 - August 31
Sevogle	
(above Square Forks)	June 8 - Sept. 15
Tabusintac	July 1 - October 15
Other tributaries of Main Southwest Miramichi (above Cains River- Except Rocky Brook)	June 8 - Sept. 15

Indian Fishery

In Zone 2, the following Indian bands will be authorized to conduct a food fishery under authority of a special licence:

1) Red Bank Indian Band
2) Big Cove Indian Band
3) Burnt Church Indian Band
4) Eel Ground Indian Band

The terms and conditions of the special licence are subject to negotiations between the Department of Fisheries and Oceans and the Band Chiefs and Councils. Negotiations are underway to redirect the food-fishery from gillnets to trapnets.

ZONE 3 - SOUTH WESTERN NEW BRUNSWICK

Commercial Fishery

Fishery	Season
Saint John	- Closed
Petitcodiac	- Closed

1. Licensing

The Scotia-Fundy Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish

Seasons

River	Opening/Closing Dates
Black Salmon	April 15 - May 15
Bright Salmon	
Waters tributary to the Bay of Fundy with the following exceptions:	June 15 - October 15
Big Salmon River - upstream of and including Walton Dam Pool	June 15 - Sept. 15
Big Salmon River - downstream from Walton Dam Pool	June 8 - October 24
Hammond River - below French Village Bridge Pool	June 15 - October 31
Hammond River - upstream from French Village Bridge Pool	June 15 - October 15
Kennebecasis River	June 15 - October 31
Nashwaak River - upstream from the Bridge at Stanley	June 15 - Sept. 30
Nashwaak River - downstream from the Bridge at Stanley	June 15 - October 15
St. John River - upstream from the Grafton Bridge at Woodstock	June 15 - Sept. 30
St. John River - downstream from the Grafton Bridge at Woodstock	June 1 - October 15
Peticodiac River System	August 15 - October 15
Point Wolfe River	Closed all year
St. Croix River	June 15 - September 15
Tobique River	June 15 - September 15

Indian Fishery

Kingsclear Reserve

Food fishery to be conducted as outlined in Section 6.2 of the New Brunswick Fishery Regulations under the Fisheries Act.

ZONE 4 - PRINCE EDWARD ISLAND

Commercial Fishery

Fishery	Season
St. Peters' Bay	Closed
Morrell river Stocks (Northeast shore)	Closed

1. Licencing

The Gulf Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 5 fish

Possession limit - 1 fish

Daily bag limit - 1 fish

Season

River	Opening/Closing Dates
All PEI Rivers	July 1 - Sept. 30
All PEI Rivers (Hook and Release only)	October 1 - October 31

ZONE 5 - CAPE BRETON EAST

Commercial Fishery

Waters	Season
All coastal waters	Closed

1. Licensing

The Scotia-Fundy Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish

Season

Rivers	Opening/Closing Dates
All the waters of any rivers and tributaries which flow into the Atlantic Ocean bounded by Cape Breton and Richmond Counties and that portion of Victoria County south of cape North, with the exception of the following:	June 15 - October 15
North River	June 1 - September 30

Indian Food Fishery

Wagmatcook Reserve

Food fishery to be conducted as outlined in a licence issued pursuant to Section 6(1) of the Nova Scotia Fishery Regulations under the Fisheries Act. The allocation will not exceed 100 fish.

ZONE 6 - NORTHUMBERLAND

Commercial Fishery

Waters	Season
All waters within Zone 6, Gulf shore of Nova Scotia	Closed

1. Licensing

The Gulf Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish

Season

River	Opening/Closing Dates
All waters of Salmon Management Zone 6 with the exception of the following:	Sept. 1 - October 29
Margaree River (downstream from the Big Interval Bridge)	June 1 - October 15
Margaree River (upstrean from the Big Interval Bridge)	Closed all year

ZONE 7 - EASTERN SHORE

Commercial Fishery

Waters	Season
All coastal waters of Guysborough County and that portion of Halifax County east of the City of Halifax.	Closed

1. Licensing

The Scotia-Fundy Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 10 fish

Possession Limit - 6 fish

Daily bag limit - 2 fish

Season

River	Opening/Closing Dates
All waters of Salmon Management Zone 7 with the exception of the following:	June 1 - August 29
All rivers and tributaries thereof that flow into that portion of Chedabucto Bay bounded by Guysborough County.	June 24 - Sept. 22
Country Harbour River	June 24- Sept. 22
St. Mary's River, downstream from a point 100 m upstream from Silver's Bridge and downstream from the highway bridge at Glenelg	May 18 - August 29
East River, St. Mary's upstream from a point 100 m upstream of Silver's Bridge	May 18 - August 14
West River, St. Mary's upstream from the highway bridge at Glenelg	June 1 - August 14
Tangier River	June 1 - August 29

ZONE 8 - UPPER BAY OF FUNDY

Commercial Fishery

Waters	Season
All coastal waters of Annapolis, Kings, Hants, Colchester and Cumberland Counties which border on the Bay of Fundy	Closed

1. Licensing

The Scotia-Fundy Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bay limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish

Season

Rivers	Opening/Closing Dates
All the waters of any rivers and tributaries which flow into that portion of the Bay of Fundy bounded by Annapolis, Kings, Hants, Colchester and Cumberland Counties with the following exceptions:	August 15 - October 29
Gaspereau River	May 1 - July 31
Stewiagke River	August 1 - October 29

ZONE 9 - SOUTHWEST NOVA SCOTIA

Commercial Fishery

Waters	Season
All coastal waters of Lunenburg, Queens, Shelburne, Yarmouth and Digby Counties and that portion of Halifax County west of the city of Halifax.	Closed

1. Licensing

The Scotia-Fundy Region Licensing Policy will apply.

Recreational Fishery (Grilse only)

Season bag limit - 10 fish

Possession limit - 6 fish

Daily bag limit - 2 fish, with the exception of Lahave River and Petite Rivière, where a daily catch and retention limit of 1 grilse per day will apply.

Season

Rivers	Opening/Closing Dates
All the waters of the rivers and tributaries which flow into that portion of the Atlantic Ocean bounded by Lunenburg, Queens, Shelburne, Yarmouth and Digby Counties and that portion of Halifax County west of the city of Halifax with the following exceptions:	May 10 - July 31
Lahave River upstream from Morgan Falls	Closed all year
Petite Riviére	May 24 - July 31
Salmon River	May 17 - August 7
Tusket River	May 17 - August 7

NEWFOUNDLAND COMMERCIAL SALMON FISHERY

ZONE 1-N - Cape Chidley to Cape Rouge

1) Season — June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 2-N - Cape Rouge to Cape Charles

1) Season — June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 3-N - Cape Charles to Cape Bauld to cape John, excluding Straits

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 4-N - Cape John to Cape Freels

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 5-N - Cape Freels to Cape Bonavista

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 6-N - Cape Bonavista to Grates Cove

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 7-N - Grates Cove to Cape St. Francis

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 8-N - Cape St. Francis to Cape Race

1) Season June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 9-N - Cape Race to Cape St. Mary's

1) Season — June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 10-N - Cape St. Mary's to Point Crewe

1) Season — June 5 - Dec. 31

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 11-N - Point Crewe to Cinq Cerf Bay

1) Season

Point Crewe to Pass Island	June 5 - Dec. 31
Pass Island to Cape Fox	June 5 - July 10
Cape Fox to Cinq Cerf Bay	Closed

2) Licensing

The Newfoundland Region Licensing Policy applies.

ZONE 12-G (Gulf) - Cinq Cerf Bay to Cape Ray

1) Season — Closed

2) Licensing

No commercial salmon licenses will be issued.

ZONE 13-G (Gulf) - Cape Ray to Cape St. Gregory

1) Season — June 5 - July 10

2) Licensing

The Gulf Region Licensing Policy will apply.

ZONE 14-G (Gulf) - Cape St. Gregory to Cape Charles, including Straits

1) Season — June 5 - Dec. 31

2) Licensing

The Gulf Region Licensing Policy will apply.

NEWFOUNDLAND RECREATIONAL SALMON FISHERY

With the exception of Labrador, anglers in the Province of Newfoundland and Labrador will only be permitted to retain grilse. The larger multi-sea winter salmon (63cm and greater in length) must be released immediately with the least possible harm to the fish.

In 1985, DFO officials will be meeting provincial authorities to discuss licensing regimes geared towards specific river management. Negotiations will be undertaken to lay groundwork for expansion of the tagging program in Newfoundland in 1986.

Season bag limit - None

Possession limit - 4 (two day limit)

Daily bag limit - 2

Season

River	Opening/Closing Dates
Labrador	
All waters of rivers and tributaries in Labrador with the exception of the following:	June 15 - Sept. 15
Pinware River	June 8 - Sept. 15
Forteau River	June 8 - Sept. 15
Lanse au Loup River	June 8 - Sept. 15
Newfoundland	
Three sets of opening/closing dates have been set for most rivers in three respective areas of the island portion of the province:	
(a) Cape Ray, north to and including Bonne Bay	June 8 - Sept. 2
(b) Cape Bauld to Cape Ray (east and south coasts)	June 15 - Sept. 8
(c) North of Bonne Bay to Cape Bauld	June 20 - Sept. 2
The following rivers are exceptions within these areas:	
Northwest Brook, Grand Bay	June 1 - Sept. 2
Bear Cove River	June 1 - Sept. 2
Conne River	June 8 - Sept. 2
Garnish River	June 8 - Sept. 2

River	Opening/Closing Dates
St. Genevieve River	June 8 - Sept. 2
Ten-Mile Lake and tributary streams	June 8 - Sept. 2
Round Lake and tributary streams	June 8 - Sept. 2
Lower Humber River	June 8 - Sept. 2
Upper Humber River (Deer Lake to Big Falls)	June 8 - Sept. 15
Southeast River, Placentia	June 22 - Sept. 2
Northeast River, Placentia	June 22 - Sept. 2
Indian River	June 22 - Sept. 2
Exploits River	June 22 - Sept. 2
Terra Nova River	June 22 - Sept. 2
Little Salmonier River	June 22 - Sept. 2
West River, St. Barbe	June 22 - Sept. 2
Fox Island River	June 22 - Sept. 2
Watson's Brook	June 22 - Sept. 2
Little Codroy River	July 1 - Sept. 2
Harry's River	July 1 - Sept. 2
Little Barachois River	July 1 - Sept. 2
Torrent River and Tributaries	* - Sept. 2

* Opening when 1000 salmon have passed upstream through the fishway.

The following rivers will not be open to anglers in 1985:

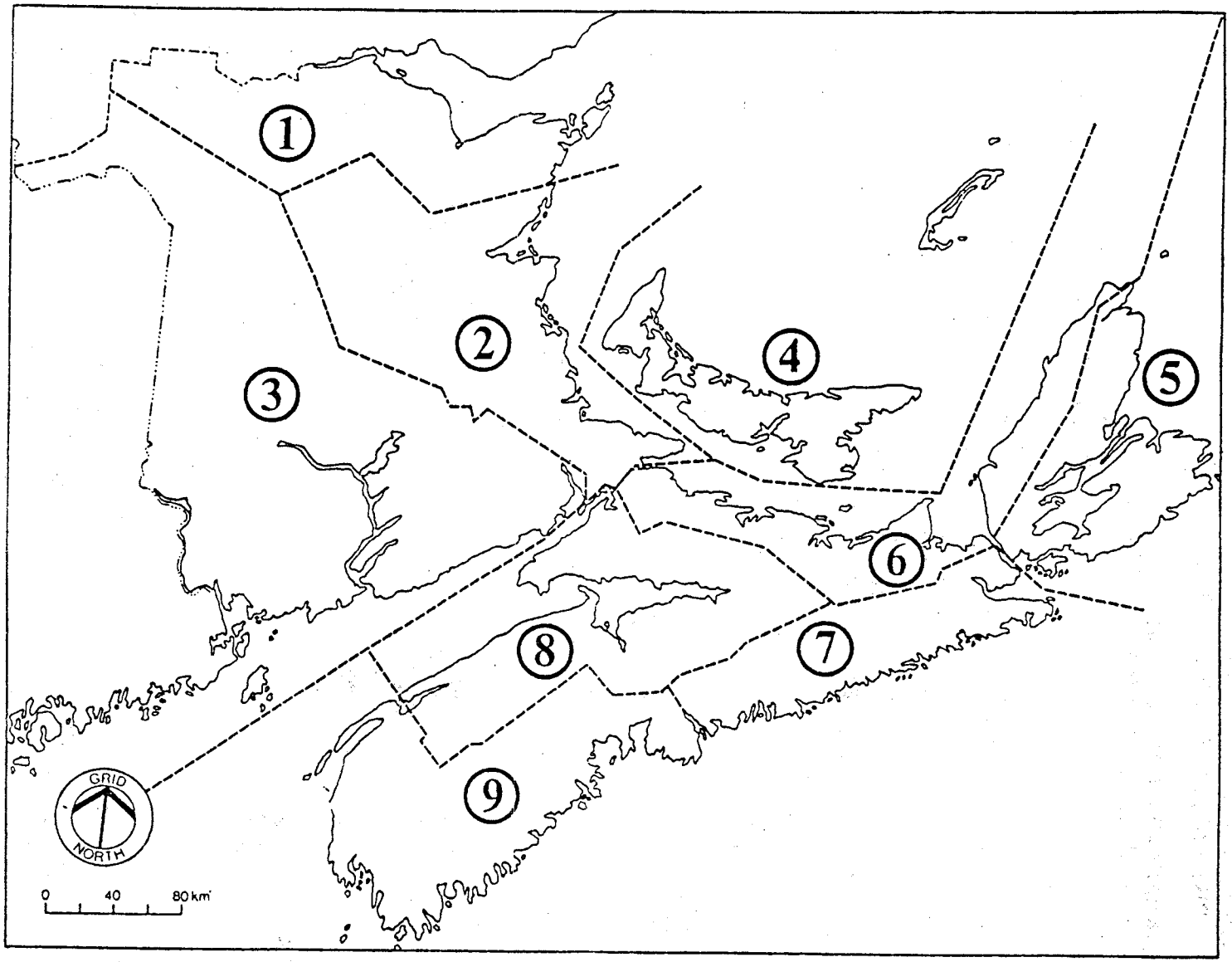
Colinet River	Closed all year
Tides Brook (Mortier Bay) and tributaries	Closed all year
Highlands River	Closed all year
Serpentine River and tributaries	Closed all year
Hughes Brook	Closed all year
Goose Arm River	Closed all year
Cook's Brook	Closed all year
Parker's River	Closed all year
Western Brook and tributaries	Closed all year

ANNEX 1

MANAGEMENT ZONES

ZONE	PROVINCE	REGION
1. - Restigouche	New Brunswick	Gulf
2. - Miramichi	New Brunswick	Gulf
3. - Saint John	New Brunswick	Scotia-Fundy
4. - Prince Edward Island	P.E.I.	Gulf
5. - Cape Breton East	Nova Scotia	Scotia-Fundy
6. - Northumberland	Nova Scotia	Gulf
7. - Eastern Shore	Nova Scotia	Scotia-Fundy
8. - Upper Bay of Fundy	Nova Scotia	Scotia-Fundy
9. - Southwest Nova Scotia	Nova Scotia	Scotia-Fundy
1N - Cape Chidley to Cape Rouge	Newfoundland	Newfoundland
2N - Cape Rouge to Cape Charles	Newfoundland	Newfoundland
3N - Cape Charles to Cape Bauld to Cape John, excluding Straits.	Newfoundland	Newfoundland
4N - Cape John to Cape Freels	Newfoundland	Newfoundland
5N - Cape Freels to Cape Bonavista	Newfoundland	Newfoundland
6N - Cape Bonavista to Grates Cove	Newfoundland	Newfoundland
7N - Grates Cove to Cape St. Francis	Newfoundland	Newfoundland
8N - Cape St. Francis to Cape Race	Newfoundland	Newfoundland
9N - Cape Race to Cape St. Mary's	Newfoundland	Newfoundland

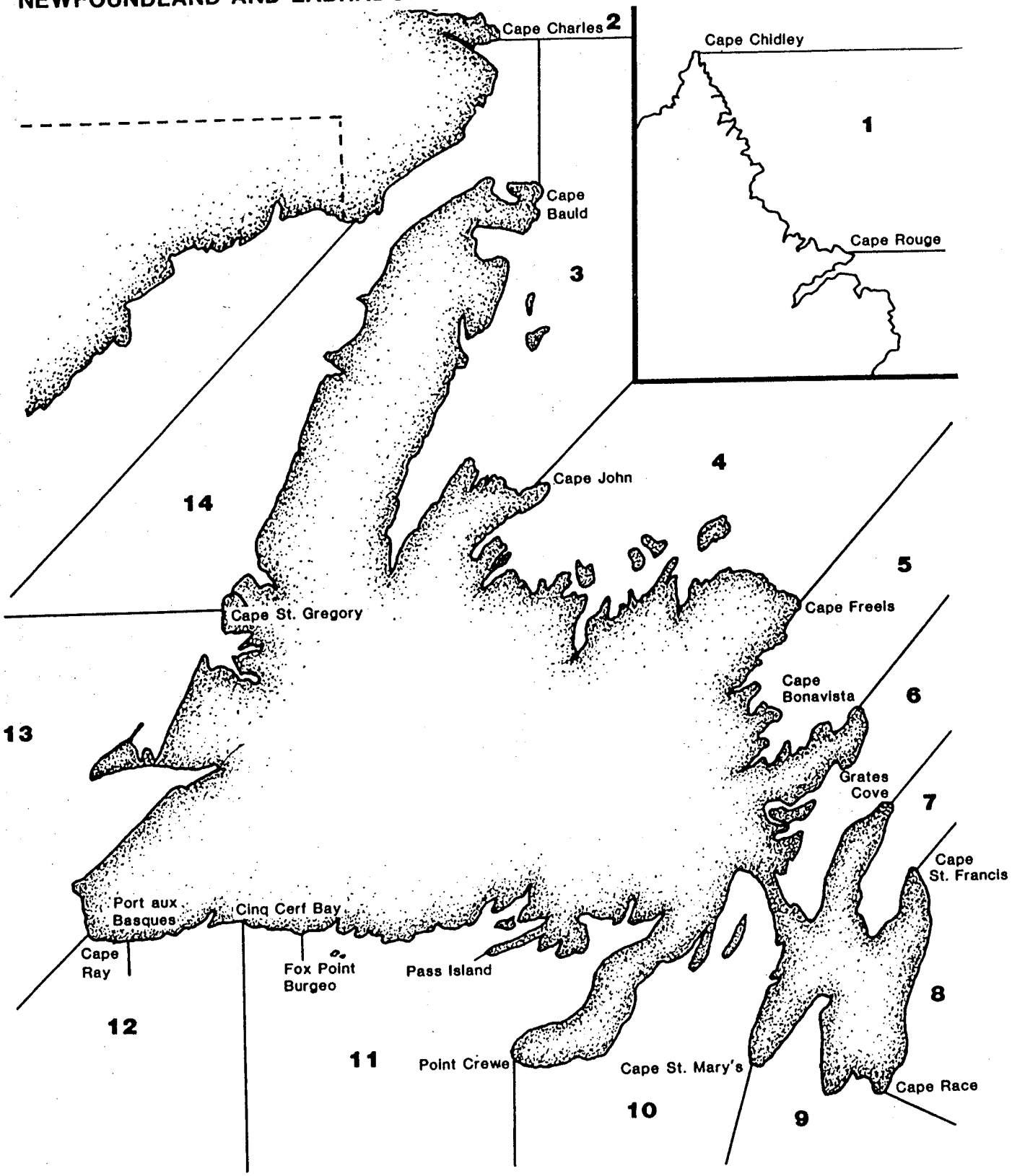
ZONE	PROVINCE	REGION
10N - Cape St. Mary's to Point Crewe	Newfoundland	Newfoundland
11N - Point Crewe to Cinq Cerf Bay	Newfoundland	Newfoundland
12G - Cinq Cerf Bay to Cape Ray	Newfoundland	Gulf
13G - Cape Ray to Cape St. Gregory	Newfoundland	Gulf
14G - Cape St. Gregory to Cape Charles, including Straits.	Newfoundland	Gulf



MANAGEMENT ZONES FOR THE MARITIME PROVINCES
ZONES DE GESTION POUR LES PROVINCES MARITIMES

ZONES DE GESTION POUR TERRE-NEUVE ET LE LABRADOR

MANAGEMENT ZONES FOR NEWFOUNDLAND AND LABRADOR



ANNEX 5

FEBRUARY 1986
QUEBEC CITY

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)6

CANADIAN ATLANTIC SALMON CATCHES (TONNES)

(January 31, 1986)

TABLE. Canadian Atlantic Salmon Catches (Tonnes)

(Information provided to the International Council for Exploration of the Sea (ICES)).

Year	Grilse	Salmon	Total
1960	-	-	1,636
1961	-	-	1,583
1962	-	-	1,719
1963	-	-	1,851
1964	-	-	2,069
1965	-	-	2,116
1966	-	-	2,359
1967	-	-	2,863
1968	-	-	2.111
1969	-	-	2,202
1970	761	1,562	2,323
1971	510	1,482	1,992
1972	558	1,201	1,759
1973	783	1,651	2,484
1974	950	1,589	2,539
1975	912	1,573	2,485
1976	785	1,712	2,506
1977	662	1,883	2,545
1978	320	1,225	1,545
1979	582	705	1,287
1980	917	1,763	2,680
1981	818	1,619	2,437
1982	716	1,082	1,798
1983	513	911	1.424
1984	467	645	1,112
1985	574	526	1,100

The 1985 total catch of salmon (1,100 tonnes) is:

- 41.8% below the previous 5 year mean (1,890.2)
- 44.4% below the previous 10 year mean (1,976.9)
- 46.5% below the previous 15 year mean (2,057.9)
- 48.3% below the previous 20 year mean (2,128.5)

For the MSW (multi-sea-winter) salmon only, the catch in 1985 of 526 tonnes is:

- 56.3% below the previous 5 year mean (1,205.0)
- 59.9% below the previous 10 year mean (1,311.7)
- 61.7% below the previous 15 year mean (1,373.5)

NOTE: ALL CATCH FIGURES FOR 1985 ARE PRELIMINARY

(January 31, 1986)

TABLE: A COMPARISON OF THE OVERALL 1983, 1984 AND 1985 ATLANTIC SALMON FISHERIES* (IN TONNES)

AREA	GRILSE			SALMON			TOTAL		
	83	84	85	83	84	85	83	84	85
QUEBEC									
R	4.2	4.0	7.0	46.6	37.8	46.7	50.8	41.8	53.7
C	6.4	1.5	4.2	88.1	60.6	65.6	94.5	62.1	69.8
TOTAL	10.6	5.5	11.2	134.7	98.4	112.3	145.3	103.9	123.5
NEWFOUNDLAND									
R	55.8	63.0	62.8	8.0	3.4	1.3	63.8	66.4	64.0
C	401.5	346.3	445.8	615.0	475.1	386.7	1016.5	821.4	832.4
TOTAL	457.3	409.3	508.6	623.0	478.5	388.0	1080.3	887.8	896.9
MARITIMES									
R	29.5	34.8	51.5	37.5	2.0	0	67.0	36.8	51.5
C	15.6	14.9	0	115.8	41.0	0	131.4	55.9	0
TOTAL	45.1	49.7	51.5	153.3	43.0	0	198.4	92.7	51.5
NATIVE	?	2.1	2.9	?	25.0	26.0	?	27.1	28.9
TOTAL	513.0	466.6	574.2	911.0	644.9	526.3	1424.0	1111.5	1100.5

* Numbers may not add directly due to rounding process.

R = Recreational
C = Commercial

NOTE: ALL CATCH FIGURES FOR 1985 ARE PRELIMINARY

(January 31, 1986)

NOMINAL CATCHES (PROVISIONAL) OF ATLANTIC SALMON IN CANADA
FOR 1985 (IN KG ROUND FRESH WEIGHT)

	GRILSE	% OF TOTAL	SALMON	% OF TOTAL	TOTAL	% OF TOTAL
QUEBEC						
R	7,046	1.2	46,670	8.9	53,716	4.9
C	4,232	0.7	65,584	12.5	69,816	6.3
Total	11,278	1.9	112,254	21.4	123,532	11.2
NFLD.						
R	62,759	10.9	1,273	0.2	64,032	5.8
C	445,789	77.6	386,746	73.5	832,435	75.6
Total	508,548	88.5	388,019	73.7	896,467	81.4
MARITIMES						
R	51,457	9.0	0	0	51,457	4.7
C	0	0	0	0	0	0
Total	51,457	9.0	0	0	51,457	4.7
NATIVE FOOD FISHERY (ALL AREAS)	2,910	0.5	25,987	5.0	28,897	2.6
TOTAL	574,193	100.0	526,260	100.0	1,100,533	100.0

R = Recreational (TOTAL = 169,205 KG OR 15.4%)
C = Commercial (TOTAL = 902,251 KG OR 82.0%)

NOTE: ALL CATCH FIGURES FOR 1985 ARE PRELIMINARY

January 31, 1986)

IMPACT OF 1984 AND 1985 SALMON MANAGEMENT PLANS ON MSW SALMON

Fishery	Average Canadian Catch of MSW Salmon for the year 1978-83 (tonnes)	PREDICTED: Average Canadian Reduction of MSW Salmon catches, if 1984 Plan had been in effect for 1978-83 (tonnes)	PREDICTED: Reduction (%)	ACTUAL 1984: 1984 Catch (tonnes)	ACTUAL 1984: Reduction From Average (tonnes)	ACTUAL 1984: Reduction %	ACTUAL 1985: 1985 Catch (tonnes)	ACTUAL 1985: Reduction From Average (tonnes)	ACTUAL 1985: Reduction %
Recreational	130.6	91.9	70.4	43.2	87.4	66.9	47.9	82.7	63.3
Mainland Commercial	206.1	104.0	50.5	101.6	104.5	50.7	65.6	140.5	68.2
Newfoundland Commercial	880.7	117.5	13.3	475.1	405.6	46.1	386.7	494.0	56.1
TOTAL	1,217.4	313.4	25.7	619.9	597.5	49.1	500.2	717.2	58.9

NOTE: ALL CATCH FIGURES FOR 1985 ARE PRELIMINARY

(Revised January 31, 1986)

IMPACT OF 1984 AND 1985 MANAGEMENT PLAN ON NEWFOUNDLAND COMMERCIAL SALMON FISHERIES

ZONE	1978-82 Avg. Catch (Tonnes)	1983 Catch (Tonnes)	1984 Catch (Tonnes)	1985 Catch (Tonnes)	Reduction Expected Seasonal Changes %	Actual Reduction %
	124	81	51	72	0.0	41.9
	485	286	211	139	0.0	71.3
	257	191	134	95	1.4-2.8	63.0
	166	125	128	109	4.4-9.0	34.3
	70	58	60	71	15.2-24.6	(1.4)
	57	30	35	65	15.7-28.3	(14.0)
	45	23	20	24	32.8-50.4	46.7
	40	24	32	31	21.4-35.5	22.5
	17	9	12	10	2.3-4.5	41.2
0	36	22	28	51	9.1-14.0	(41.6)
1	54	44	34	102	11.9-17.7	(88.8)
2	79	53	0	0	100.0	100.0
3	40	33	43	32	0.0-5.2	20.0
4	36	37	33	30	0.0-2.5	16.6
TOTAL	1,504	1,016	821	832	9.8-12.9	44.7
INSULAR NFLD. ONLY	895	649	559	621	16.4-21.6	30.6

*Brackets indicate an increase from average rather than a reduction.

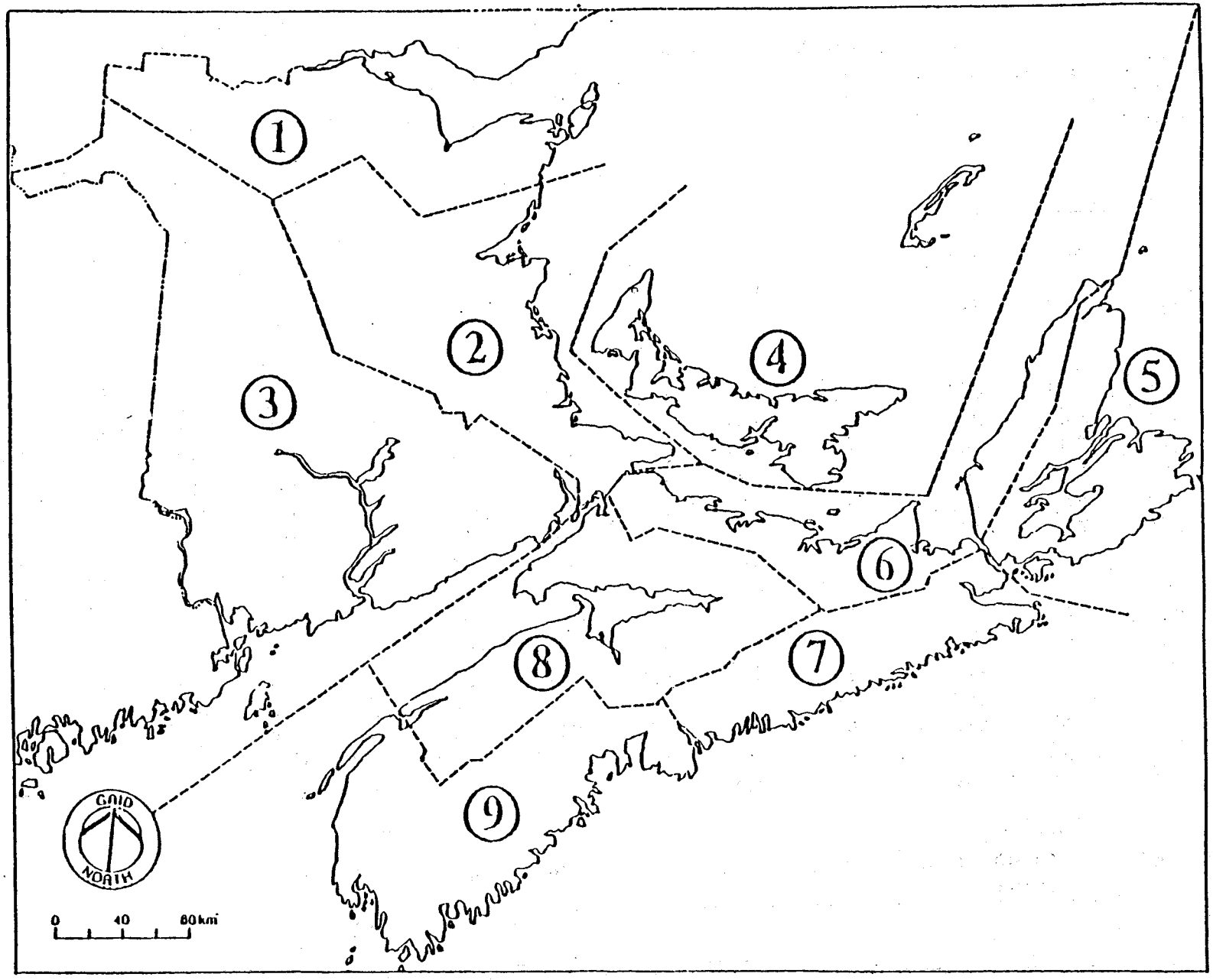
Table . Number of licensed commercial salmon fishermen by Statistical Area, 1975-85. Percent change 1975-85 and 1983-85 in number licensed is also shown.

Area	Licensed salmon fishermen											% Change	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[a]	1985 eligible for licenses (c)		1983-85	1975-85
A	769	696	655	664	663	651	636	605	614	541	464	479	-24	-40
B	1,399	1,234	1,154	1,148	1,148	1,163	1,126	1,047	1,033	892	692	730	-33	-51
C	765	685	622	621	617	591	550	493	479	395	279	301	-42	-64
D	596	525	469	473	457	446	412	394	383	317	266	276	-31	-55
E	635	518	446	459	445	449	429	375	356	277	231	240	-35	-64
F	314	308	264	261	266	246	246	239	239	200	187	189	-22	-40
G	103	103	86	87	85	81	75	71	68	58	45	47	-34	-56
H	388	335	303	284	296	279	269	255	250	201	161	169	-36	-59
I	226	194	188	186	186	182	179	159	149	128	109	111	-27	-52
J	393	353	324	316	308	294	288	279	267	92	80	82	-70	-80
K	181	157	142	139	140	130	124	117	113	87	72	75	-36	-60
L	140	111	97	100	93	95	94	86	82	66	35	41	-57	-75
M	185	157	144	141	138	137	134	128	122	95	86	88	-30	-54
N	158	130	112	118	116	109	109	105	107	100	90	92	-16	-43
O[b]	729	781	750	818	810	739	731	716	801	727	698	704	-13	-4
Total Nfld.	6,252	5,506	5,006	4,997	4,958	4,853	4,671	4,353	4,262	3,449	2,797	2,922	-34	-55
Prov.	6,981	6,287	5,756	5,815'	5,768	5,592	5,402	5,069	5,063	4,176	3,495	3,626	-31	-50

[a]Excludes individuals who participated in license buy back.

[b]Includes salmon/charr licenses in Section 53.

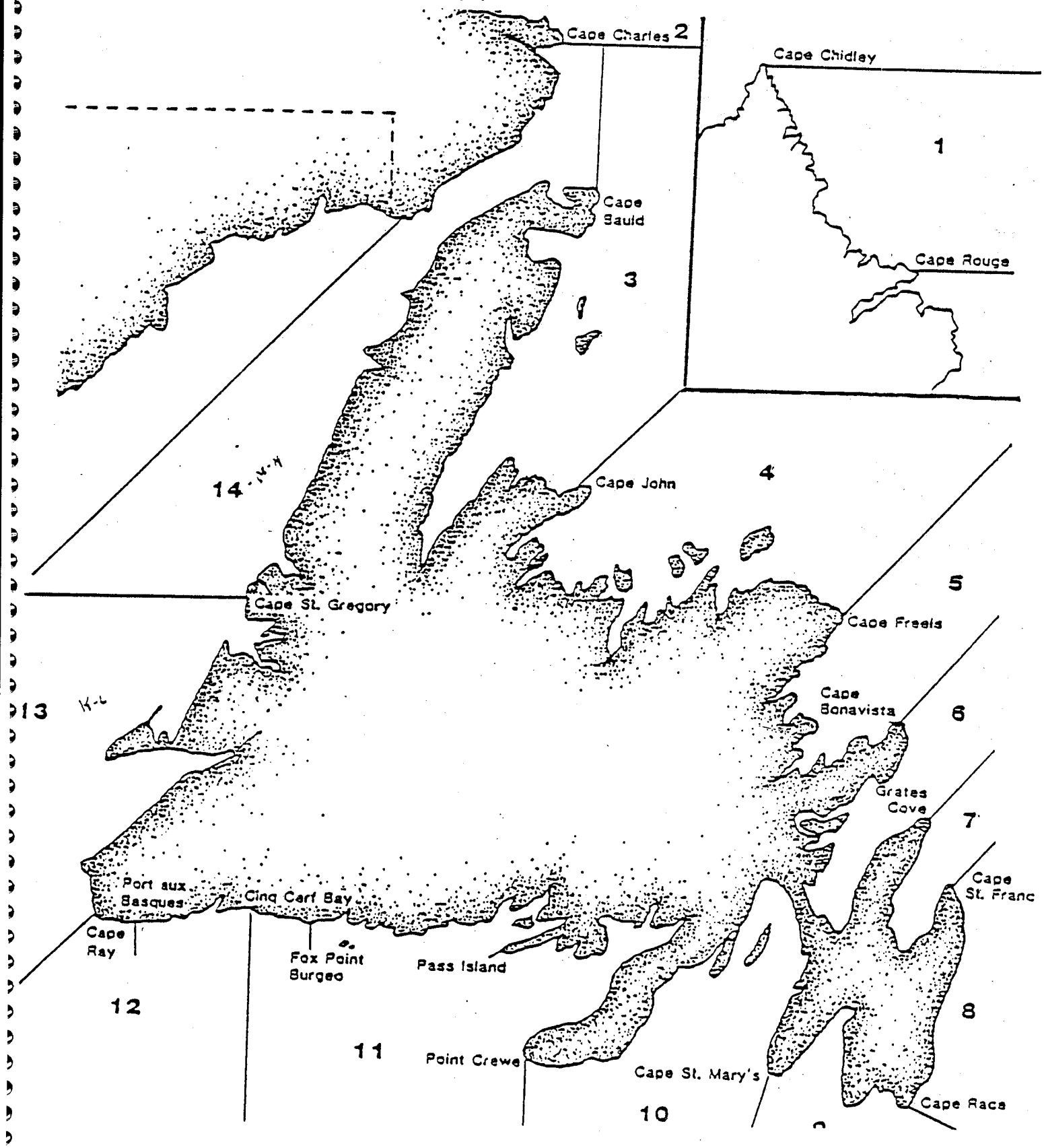
[c]Only 81 percent of part-time fishermen participated in the 1985 buy-back program The number of licences issued in 1985 was amended proportionately.



MANAGEMENT ZONES FOR THE MARITIME PROVINCES
ZONES DE GESTION POUR LES PROVINCES MARITIMES

ZONES DE GESTION POUR
TERRE-NEUVE ET LE LABRADOR

MANAGEMENT ZONES FOR
NEWFOUNDLAND AND LABRADOR



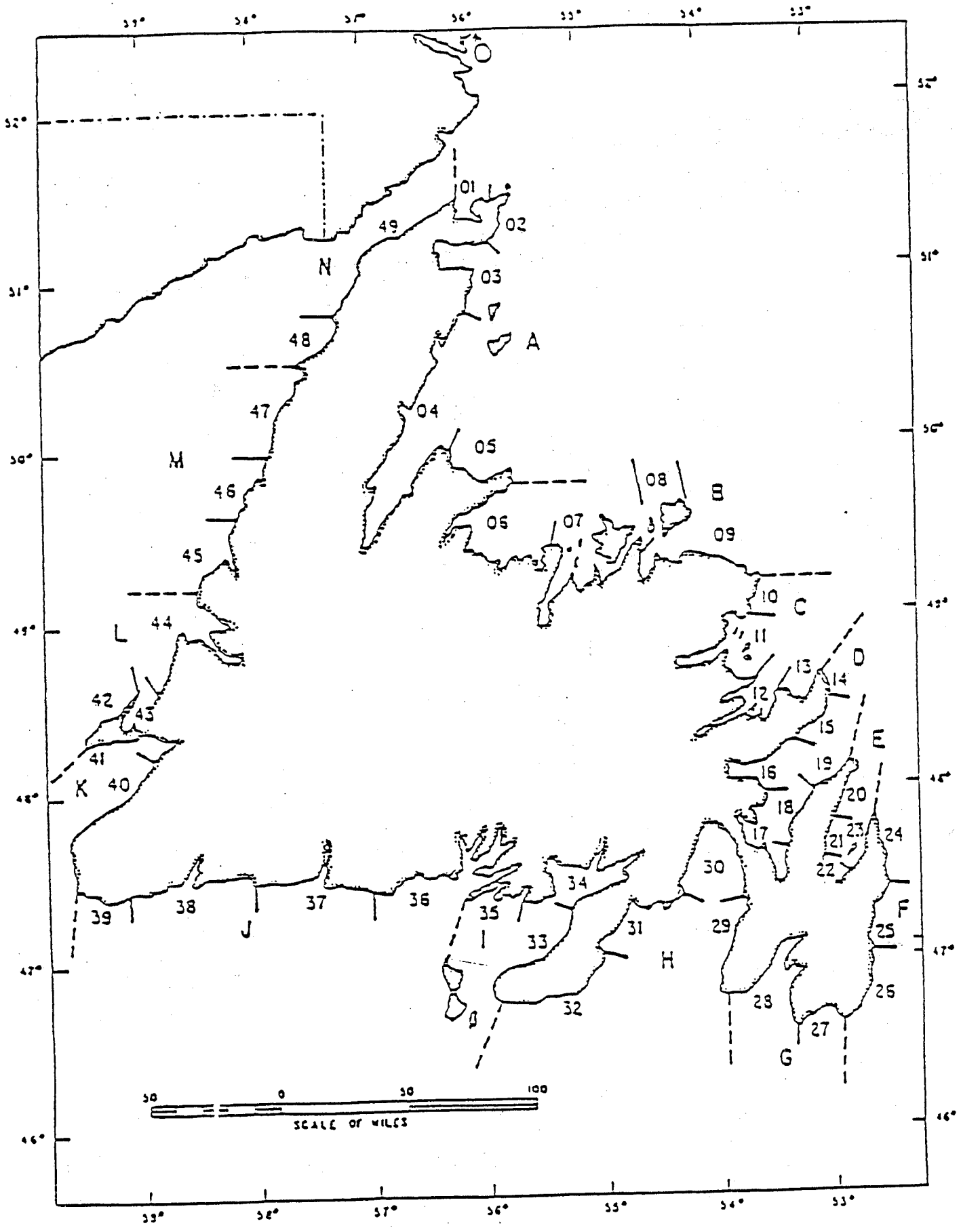


Fig. 4: Boundaries of Statistical Section (numerically indicated) and Statistical Areas (alphabetical) in insular Newfoundland.

ANNEX 6

FEBRUARY 1986
QUEBEC CITY

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC(86)7

THE STATUS OF ATLANTIC SALMON STOCKS IN ATLANTIC CANADA AND ADVICE FOR THEIR MANAGEMENT IN 1986

Canadian Atlantic Fisheries
Scientific Advisory Committee

CAFSAC Advisory Document 85/22
(Revised)

The Status of Atlantic Salmon Stocks in Atlantic Canada and Advice for their Management in 1986

At its meeting of November 27-28, 1985, CAFSAC considered available data and analyses concerning the general status of Atlantic salmon stocks throughout Atlantic Canada, and, in particular the status of Atlantic salmon stocks in Miramichi, Restigouche, Saint John and Margaree rivers.

STATUS OF SPECIFIC STOCKS

Miramichi River

As in 1984, the harvest of multi-sea-winter (MSW) salmon in the Miramichi River in 1985 was restricted: there was no drift net or trap net fishery; anglers were allowed to retain one-sea-winter (1SW) salmon only; and, as in previous years, native fisheries were not restricted by quota. Total catches in the period 1951-1970 were at about an annual level of 77,000 fish but with such increased catches in 1964-67, the highest catch being about 162,000 fish in 1967 (Figure 1). Catches in the period 1971-83 were at about the 37,000 level. Catches in 1984 and 1985 are given below (numbers of fish):

Fishery	1985 MSW	1985 1SW	1984 MSW	1984 1SW
Commercial				
traps	---	---	---	---
drift	---	---	---	---
by-catch	not available		not available	
Native	327	546	309	381
Angling*	---	17,330	---	18,794
Total	327	17,876	309	19,175

*Estimated

Returns of MSW salmon in 1985 were about 30% greater than predicted in 1984 while returns of 1SW salmon were 10% greater than predicted returns.

Target spawning requirements were revised in 1985 to reflect both new information on the fecundity of stocks native to Miramichi River, and the objective of obtaining eggs from only MSW salmon. The spawning escapement of 23,600 MSW salmon and 22,600 1SW salmon would insure an adequate sex ratio (the MSW salmon are mostly female) and the required 132 million eggs.

Spawning escapements in 1985 were estimated from two methods; the first, assumes that Millbank Trap catches a constant proportion of river escapement; and the second relates subsequent parr density to catches at Millbank Trap. The first method indicated that spawning requirements were almost met, the second, however, indicated that they were only 50% achieved. Both methods depend upon the efficiency of Millbank Trap. An experiment in 1985 indicated that the efficiency of Millbank was less than half of a previous estimate in 1973. It is not clear which estimate of efficiency is more appropriate for intervening years, or if both are merely varying estimates of the same value. The 1985 estimate, based as it is on a relatively small number of recaptures, needs to be substantiated with a future experiment. The new estimate of efficiency was used to calculate 1985 returns only, but it was not known if the efficiency of Millbank Trap was different in other years, especially since the advent of dredging in 1981.

The forecast of MSW salmon returns in 1986 was based on an historical relationship between counts of 1SW salmon at Millbank Trap and MSW salmon returns to Miramichi River in the following year. The predicted return in 1986 is 28,400 MSW salmon, with 95% confidence limits of 5,500-51,000.

One-sea-winter salmon in 1986 will be mostly of the 1982 year-class (year of emergence). The abundance of age 1+ parr of this year-class was slightly above average and returns of 1SW salmon in 1986 are therefore expected to be about 40,700 fish, the average return in the period 1981-85.

The surplus to spawning requirements in 1986 is estimated to be 4,800 salmon and 18,100 grilse. Because of the wide confidence limits in the MSW salmon forecast and the uncertainty of the efficiency of Millbank Trap, it is recommended that there be no increase in exploitation of MSW salmon in 1986.

Restigouche River

Restrictions on the harvest of Atlantic salmon from the Restigouche River in 1985 were: no commercial fishery on either the New Brunswick or Québec side of Chaleur Bay; anglers in New Brunswick were allowed to land only 1SW salmon, with bag limits of 2 grilse per day and 10 grilse per season; anglers on Restigouche tributaries in Quebec landed both 1SW and MSW salmon with bag limits of 1 salmon per day and 7 salmon per season; and, native fishermen at Cross Point, Québec, were restricted by quota (6,995 kg). Native fishermen at Eel River Bar, N.B. were not restricted by quota. Catches in the period 1951-70 varied from about 18,000 to 46,000 fish with an average of about 32,000 fish (Figure 2). In the period 1971-83 the average catch was about 10,000 fish. Catches in 1984 and 1985 were (numbers of fish):

Fishery	1985		1984	
	MSW	1SW	MSW	1SW
Commercial traps				
New Brunswick	---	---	1,958	6,716
Quebec	---	---	---	---
Native				
Cross Point	976	35	1,070	177
Eel River Bar	241	0	213	1
Angling				
New Brunswick	---	2,965	---	1,474
Quebec	752	259	570	348
	1,969	3,259	3,811	8,716

Homewater returns in 1985 were estimated from two methods. The first method, based on an angling exploitation rate of 20%, was considered optimistic. According to this method, the target spawning escapement has been reached. The second method which related angling catches to spawning escapement using subsequent parr densities indicated that about 80% of the target was achieved.

The forecast returns of MSW salmon in 1986 was based on a relationship between sport catch of 1SW salmon at Kedgwick Lodge and total returns of large salmon to Restigouche River in the following year. The predicted returns in 1986 are 14,800 MSW salmon (95% confidence limit of 8,862-20,759).

Returns of 1SW salmon in 1986, assuming average returns from 1981 to 1985 could be about 8,800 fish. One-sea-winter salmon in 1986 will be predominantly from the 1982 year-class; densities of age 1+ parr of this year-class were about average. Returns of 1SW salmon in 1986 are expected to be about 8,000 fish, the average return in the period 1981-85.

The surplus to spawning requirements in 1986 would be about 2,600 MSW salmon and 6,000 1SW salmon. If fishing patterns in 1986 remain the same as in 1985, however, there will be no surplus to spawning requirements of MSW salmon. It is recommended that there be no increase in the exploitation of MSW salmon in 1986.

Saint John River

In 1985, there were two changes to the fishing plan introduced in 1984: these included the negotiation of revised closed periods - June 30 to July 17 and July 28 to August 14, within the June 1 and October 15 open season of the Kingsclear food fishery (quota remained at 900 fish), and the angling season was extended by up to two weeks in certain areas. Catches in the period 1949-83 fluctuated widely with an average catch of about 10,000 fish (Figure 3). Catches in 1985 and 1984 for comparison are given below (numbers of fish):

Fishery	1985 MSW	1985 1SW	1984 MSW	1984 1SW
By-catch*	2,294	531	1,211	450
Native*	2,517	483	2,133	353
Sport	323**	4,035	291**	2,798
Total	5,134	5,049	3,635	3,601

*Estimates
**Estimates of catch and release mortality and poaching

Estimates of total returns in 1985 were 14,700 MSW salmon and 12,100 1SW salmon, which were close to the forecasts made in 1984. It was estimated that target spawning requirements were exceeded by 40% above Mactaquac Dam, but returns to below the dam were about 50% below requirements.

Returns in 1986 of wild MSW salmon originating above and below Mactaquac Dam were forecast from an historical relationship from 1970 to 1984 between wild grilse returns and wild large salmon returns in the following year. Grilse returns in 1985, from production above Mactaquac, were forecast from an historical relationship between egg densities on Tobique River (1968-79) and the subsequent production of wild grilse above Mactaquac Dam. Wild grilse returns produced below Mactaquac were forecast using the historical relationship (1970-85) between grilse returns above Mactaquac Dam and grilse returns below. Returns of hatchery - reared grilse and salmon were forecast from mean home river returns rates and number of smolts released.

There is a forecast surplus beyond spawning requirements of 1,900 1SW salmon and 2,800 MSW salmon in 1986. There will be a deficit of 1,100 MSW salmon below spawning requirements returning to tributaries below Mactaquac Dam. If fishing patterns in 1986 remain the same as in 1985, however, there will be no surplus to spawning requirements of MSW salmon to returning to tributaries above Mactaquac Dam. It is recommended that there be no increase in the exploitation of MSW salmon in 1986.

Margaree River

Anglers have been required to release MSW salmon during the early part of the run (before September 1) since 1979. Nineteen eighty-five was the first year in which all MSW salmon were to be released regardless of date caught. In 1984 there was a reduction in the commercial fishery from 8 to 3 weeks. There was no commercial fishery in 1985. Margaree River salmon stocks are composed of two runs: the summer run enters the river up to the end of August; and the fall run, during September and October. Since 1979, there have been attempts to rebuild the summer run.

Catches in the recreational fishery were variable but averaged about 300 fish, about two-thirds of which were MSW salmon (Figure 4). Large catches of 1SW salmon in the early 1980s was a consequence of stocking from hatcheries. The 1985 and 1984 recreational catches are compared below:

	1985	1984
1SW salmon	222	148
MSW salmon	314	121

Spawning requirements were calculated to be 1,036 MSW salmon and 579 1SW salmon. It was assumed that 100% of egg deposition requirements should come from MSW salmon. The 1985 spawning escapement was derived from the angling catch using an exploitation rate of 12.9% for MSW salmon and 20.6% for 1SW salmon. The 12.9% exploitation rate was calculated based on a 10% survival rate from egg to 1+ parr and a significant correlation between MSW salmon in sport catch (year i) and 1+ parr (year i+2). Compared to other rivers, 12.9% is a low exploitation rate and should be interpreted with caution; it was used because a large component of the MSW salmon run enters the river after the angling season is closed. Based on these exploitation rates, spawning requirements were met on Margaree River in 1985.

MSW salmon returns were predicted from the regression between the number of MSW salmon in sport catch as a measure of spawning activity (year 1) with the number of MSW salmon in sport catch (year i+5). The 1985 sport catch (314 MSW salmon) was outside the confidence limits of the value predicted from 1980 sport catch (145 $\pm$ 82 MSW salmon). Based on the level of sport catch in 1981 (139 MSW salmon) a return similar to 1985 can be expected in 1986. If fishing patterns remain the same as in 1985 there will likely be a surplus of MSW salmon to spawning requirements in 1986. One-sea-winter salmon returns in 1986 could be slightly above average based on the relatively higher egg deposition rates compared to previous years.

The increase in spawning escapement and the large angling catch of MSW salmon in 1985, two times the value predicted from 1980 catch, was most likely a result of the release of MSW salmon in the sport fishery and of the closure of the commercial fishery in 1985.

GENERAL STATUS OF ATLANTIC SALMON STOCKS IN 1985

Fishery at West Greenland

The positive correlation between catches of MSW salmon in Canadian waters and catches at West Greenland in the previous year (R^2 = 0.82; P = 0.0025, N = 10) suggests that returns to Canadian waters in 1986 will be higher than those in 1984 and 1985 (Figure 5). This correlation included only years when there was no quota, or when the quota at West Greenland was not achieved. The catch at West Greenland in 1985 was restrained by the quota. While this catch is not appropriate for use in the correlation because of this bias, it is likely that abundance of MSW salmon in Canadian waters in 1986 will be above the 1984-85 levels.

Environment

The area and southerly extent of pack ice in the northwest Atlantic in 1985 was the greatest in the period 1969-85. At station 27, an oceanographic monitoring station off St. John's, Newfoundland, 1985 was the coldest year since 1960.

It was likely that catches in the commercial fisheries of Newfoundland were delayed in all areas in 1985. In years of severe ice conditions catches off the northeast coast of Newfoundland were delayed and decreased in comparison with years of moderate or low ice conditions, whereas catches in the south and southeast coast were increased. It is concluded that in years of severe ice conditions and low water temperatures such as in 1985, salmon distribution is more southerly and the timing and size of catches is affected.

There appears to be a nine month lag between conditions at Greenland and at Newfoundland. The winters of 1982-83 and 1983-84 at Greenland were the coldest on record as were sea temperatures. In the winter of 1984-85, however, sea temperatures at West Greenland were normal and it is likely that sea temperatures along the northeast coast of Newfoundland would thus return to normal in 1986.

Newfoundland Region

The low landings of MSW salmon in the commercial fishery and the generally low counts of MSW salmon at counting facilities suggested an overall low abundance of MSW salmon throughout insular Newfoundland in 1985. The high landings of 1SW salmon in commercial and recreational fisheries in most salmon management zones suggest that stock abundance in 1985 was greater than in 1983 and 1984 and at a level slightly (15%) below the 1974-84 mean abundance. Increased catches of 1SW salmon in the sport fishery and at fish counting facilities was indicative of an increase in spawning escapement.

In 1986, 1SW salmon are expected to show an increase in abundance based on the presumed higher egg deposition in 1981. MSW salmon are also expected to have higher abundance. A regression between 1SW salmon (year i) and MSW salmon in (year i+1) provides a predicted catch of 337 t of MSW salmon. This prediction assumes no change in the proportionate exploitation of small and large salmon in recent years.

The abundance of MSW salmon was extremely low in Labrador in 1985. Although landings of 1SW salmon in the commercial fishey were above the landings in 1984 they were still only about 50% of the average 1974-84 landings.

The landings of MSW in Labrador in 1986 are forecast to be 233 t from the regression between 1SW salmon (year i) and MSW salmon (year i+1) in the commercial fishery. The abundance of 1SW salmon in Labrador are expected to increase in 1986 as the stocks begin to recover from the low egg depositions of 1978 and 1979.

Gulf Region

In western Newfoundland and Gulf shore of Cape Breton, there were below average returns of salmon and grilse in 1985. The low returns were not expected because counts of smolts and grilse in 1984 were generally above average. The low returns in these areas may have been due to poor survival at sea. Low water conditions delayed upstream migration of salmon in many rivers.

In the Gulf shore of New Brunswick, mainland Nova Scotia and Prince Edward Island, there were above average returns of salmon late in the season. Returns of large salmon in Miramichi and Restigouche rivers were not above average, but this was expected as a result of the low numbers of grilse which returned in 1984. There was also evidence that low water levels delayed the upstream migration of salmon.

It is expected that returns of MSW salmon to rivers in western Newfoundland and along the Gulf shore of the Maritimes will be equal to the past ten year mean and slightly above the past five year mean. The returns to western Newfoundland should also be above the low values observed for 1985. A prediction of the sports catches of MSW salmon in rivers of St. Georges Bay (Area K in Zone 13N, see Figure 6) based on 1SW salmon catches in the previous year suggest that sports catches of MSW salmon in 1986 should be average.

Returns of 1SW salmon to rivers in western Newfoundland should be above the past ten year mean. This is based on a presumed above average egg deposition in 1981, and the above average 1985 smolt migration on Western Arm Brook. Returns of 1SW salmon to rivers along the Gulf shore of the Maritimes should be slightly above the average of the past five years; this prediction is based upon the slightly above average density of salmon parr from the 1982 year-class in Miramichi River.

Scotia-Fundy Region

Determination of the impact of the 1985 salmon management plan on salmon escapements to Nova Scotia rivers has not yet been possible. Without a commercial fishery and without a complete in-season angling statistics collections by all fishery officers there is a limited data base for reviewing the status of stocks. In due course, results from the federal-provincial cooperative program using the licence stub returns from anglers will provide some information on river escapements of 1SW and MSW salmon.

Counting results at two fish passage facilities, both on the Atlantic coast of Nova Scotia, provide some information. At the LaHave River, the returns of both wild and hatchery 1SW salmon were 50-60% of forecast levels, while the count of wild MSW salmon was about 45% higher than would have been expected in the presence of a commercial fishery. At the Liscomb River, returns of 1SW salmon were below expectation while wild MSW salmon were 60% above forecast. In summary, limited information for Nova Scotia suggests the river escapements of MSW salmon were increased substantially in 1985 probably as a result of the recent 1985 salmon management plan. Returns of 1SW salmon in 1985 indicate that returns of MSW salmon in 1986 will not improve over 1985 levels.

In New Brunswick, mainly the Saint John River, stocks in 1985 tended to show the same trend as in Nova Scotia. The forecast for returns to the Saint John River in 1986 is for a MSW salmon return similar to 1985 while the return of 1SW fish is likely to decrease about 20%.

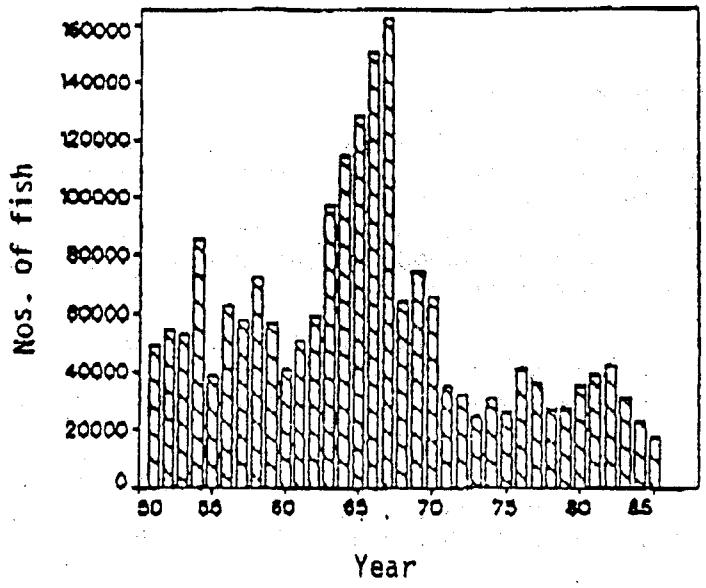


Fig. 1. Total landings of 1SW and MSW salmon in Miramichi River, 1951-85.

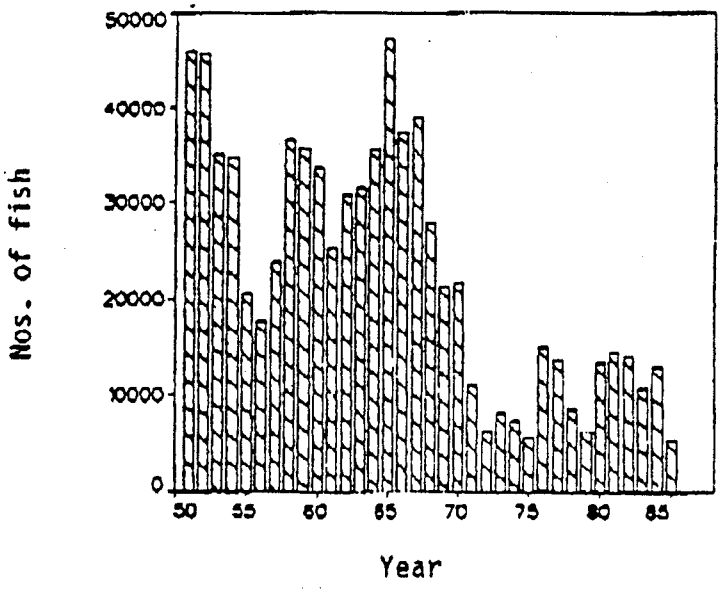


Fig. 2. Total landings of 1SW and MSW salmon in Restigouche River, 1951-85.

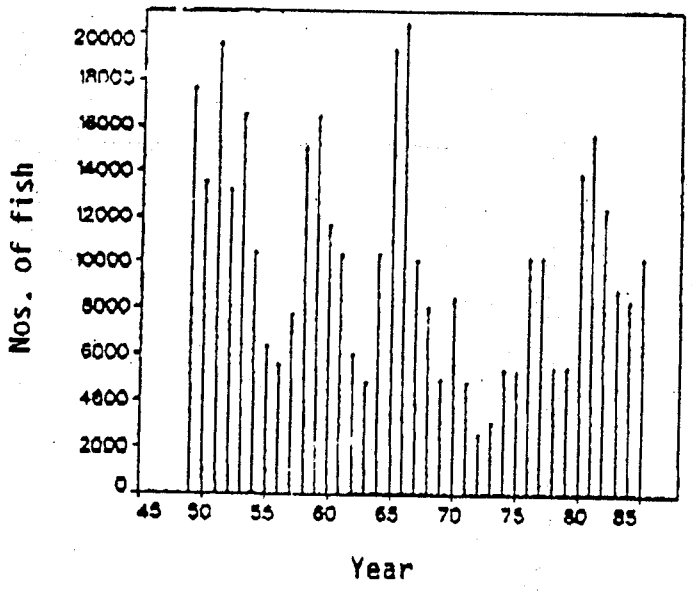


Fig. 3. Total landings of 1SW and MSW salmon in Saint John River, 1949-85.

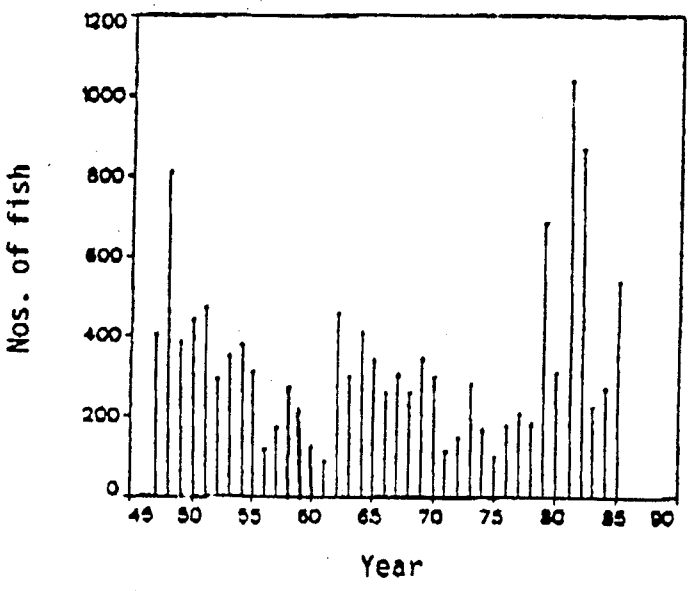


Fig. 4. Landings of 1SW and MSW salmon in the sport fishery on Margaree River, 1947-85.

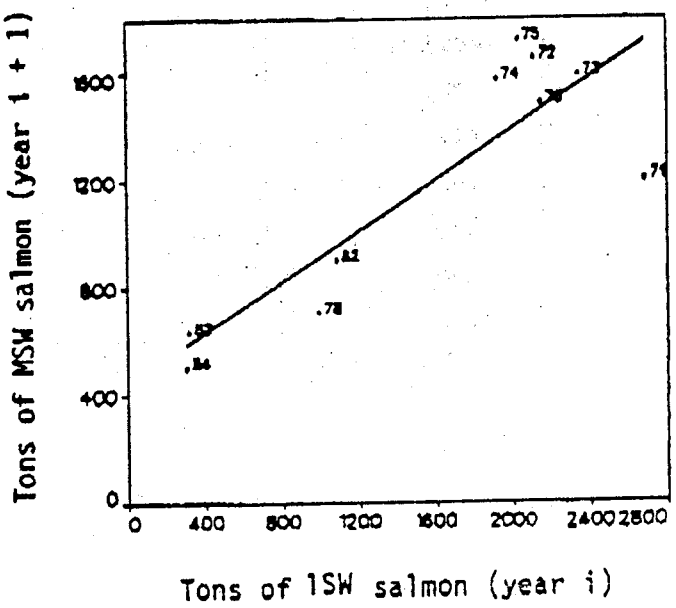


Fig. 5. Landings of 1SW salmon in West Greenland in year i and landings of MSW salmon in Canada in year i+1.

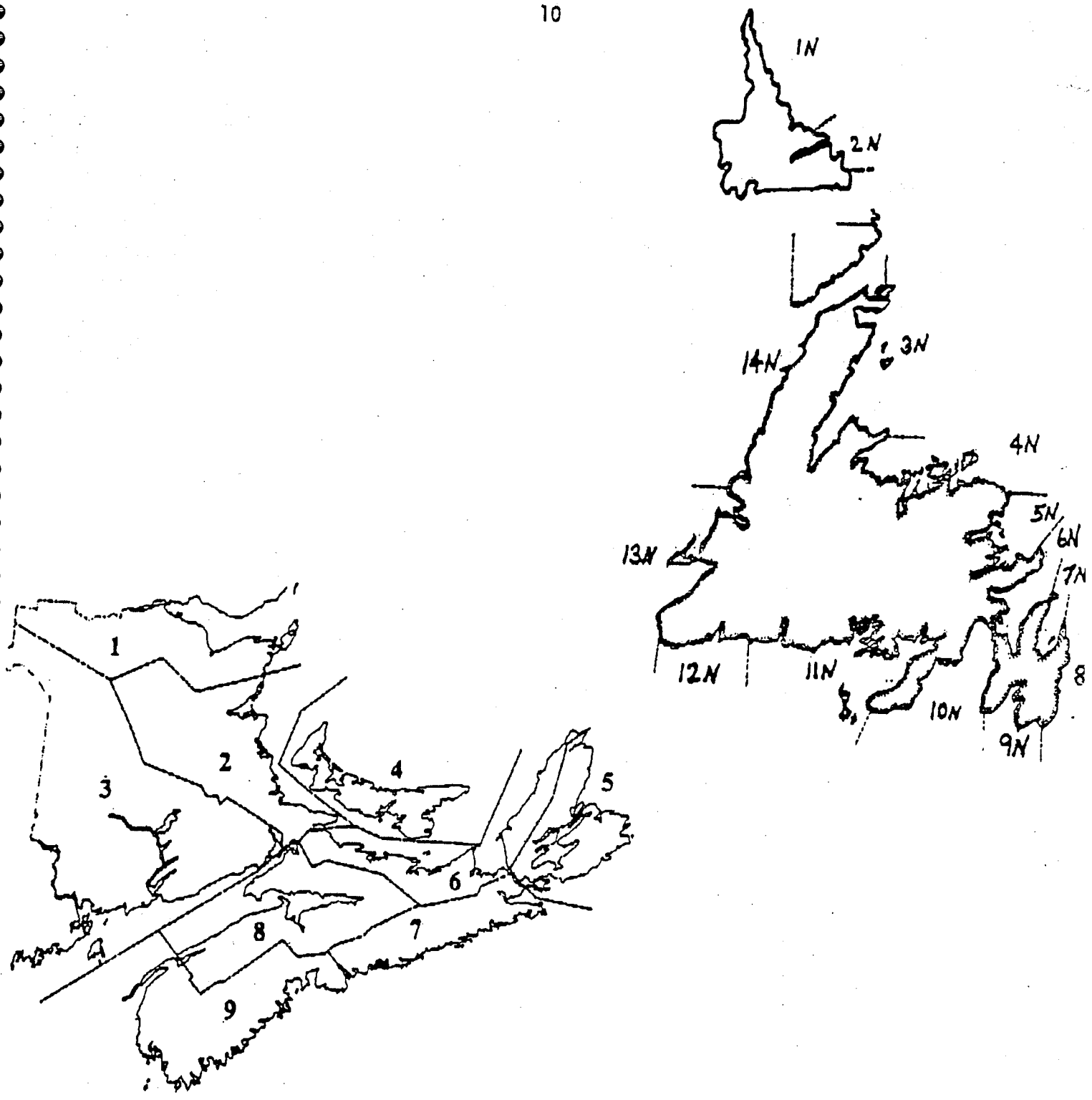


Fig. 6. Salmon Management Zones of Atlantic Canada

ANNEX 7

FEBRUARY 1986
QUEBEC CITY

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC(86)8

1985 NEW ENGLAND SALMON PROGRAM

1985 NEW ENGLAND SALMON PROGRAM

Total Program Overview

Stocking	Number	% Change from '84
smolts	1,198,000	(-6%)
fry/parr	1,348,000	(-24%)
TOTAL	2,546,000	
River Returns		
To monitored rivers*	4,309	(+83%)
Egg-Take		
Sea-run (bright)	3.2 million	(+10%)
Kelts & Domestic	3.0 million	(-17%)
Total	6.2 million	(-5%)
Sport Harvest		
All Maine Rivers	576	(-10%)
Penobscot only (kill)	320	(-16%)
Penobscot harvest rate	.10	(-62%)

By River:

	Smolts only (1,000's)	Smolts only (+ - % of '84)	Returns #	Returns (+ - % of '84)
Penobscot	588	(-5%)	3,357	(+82%)
Union	46	(-8%)	82	(+110%)
St. Croix	60	(-35%)	352	(+39%)
Other Maine Rivers	28	(-7%)	(not monitored)	
Connecticut	323	(-22%)	305	(+232%)
Merrimack	153	(+125%)	212	(+104%)
Pawcatuck	47K parr	(+88%)	1	(-96%)

*Connecticut, Merrimack, Pawcatuck, Penobscot, Union, & St. Croix

TOTAL ADULT RETURNS FOR SELECTED RIVERS BY CALENDAR YEAR

Calendar Year	Penobscot	Union	Conn.	Merrimack	Pawcatuck	St. Croix	TOTAL
1971	114						114
1972	337						337
1973	313						313
1974	584	20					604
1975	1,006	79					1,085
1976	673	249					922
1977	644	245					889
1978	1,824	164	93				2,081
1979	918	39	58				1,015
1980	3,327	238	175				3,740
1981	3,406	295	529				4,230
1982	4,161	156	70	23	38		4,440
1983	972	150	39	114	38	125	2,350
1984	1,845	39	92	104	26	244	2,350
1985	3,357	82	305	212	1	352	4,309

STOCKING BY RIVERS (1985)

(Numbers - In Thousands)

River	Smolt	Parr	Fry	Total
Penobscot	580	18	197	795
Union	46	--	8	54
St. Croix	60	13	178	251
Other Maine Rivers (7)	36	31	89	156
Connecticut	323	170	433	926
Merrimack	153	--	164	317
Pawcatuck	--	47	--	47
TOTALS	1,198	279	1,069	2,546

Estimated rates of return for hatchery smolt released in the Penobscot River between 1971-1983

Smolt * Yr Class	No. of Smolt (1,000'S)	No. Returned** to River (all ages)	Rat of Return (%)
1971	43.3	313	0.72
1972	73.8	526	0.71
1973	91.5	959	1.05
1974	100.2	635	0.63
1975	110.6	671	0.61
1976	226.9	1,696	0.75
1977	340.8	823	0.24
1978	209.3	2,752	1.32
1979	292.7	3,255	1.11
1980	586.0	4,808	0.82
1981	199.6	940	0.47
1982	315.7	1,520***	0.48
1983	445.8	2,660****	0.60
All Yr. Classes	3,036.2	21,558	0.71 % (weighted)

* Calendar year that smolt emmigrated to sea; includes 1+2-yr. old smolt

** Includes 1SW, 2SW, and 3SW, repeat spawners ignored as are wild of fry-stocked-originating returnees

*** No. of 3SW fish data available yet (85 run not aged as of 1/10/86), est. = 10

**** No. of 2SW fish not available. Estimated to be 2413 based on fact that 72% of '82 yr. class returns = 2SW hatchery fish. No. grilse known to be 237. No. of 3SW expected returns estimate = 10.

ANNEX 8

FEBRUARY 1986
QUEBEC CITY

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)3

SCIENTIFIC ADVICE FROM ICES

THE REPORT OF THE ADVISORY COMMITTEE ON FISHERIES MANAGEMENT (ACFM) (SECTIONS 4.1 - 4.2.6.)

This paper makes reference to the report of the meeting of the ICES Working Group on North Atlantic Salmon (Woods Hole, Massachusetts, 16-20 September 1985). That report is not annexed here but is available on request to the Secretariat.

4. SALMON IN THE NORTH AMERICAN COMMISSION AREA

4.1 Request from NASCO

This advice, and the appended report of the meeting of the Working Group on North Atlantic Salmon, respond to a request to ICES for advice on matters relevant to the North American Commission discussed by NASCO at its June 1985 meeting. The formal request for advice had not been received by ICES before the Working Group meeting and, hence, ICES has responded to anticipated questions contained in the draft report of the North American Commission. The questions posed are found in Appendix I of the Working Group report. The report should be consulted for detailed responses. In this text, all tables (and numbered figures) referred to are found in the Working Group report.

4.2 Questions of Interest to the North American Commission of NASCO

4.2.1 Historical catches of salmon originating in rivers or artificial production facilities of another country

New estimates of the numbers of United States-origin salmon captured in Canadian fisheries were calculated. A detailed analysis, based on tag recaptures and allowing for tag loss, non-catch fishing mortality and incomplete reporting of tags, led to revisions of estimates of the number of United States-origin one sea-winter salmon taken in the Newfoundland-Labrador fisheries from 1971 to 1983. The annual harvest in the Newfoundland-Labrador fisheries ranged from about 200 to 4,600 fish (Table 16), using the lower tag retention rate, and 200 to 5,000 fish, using the higher retention rate. Except for 1975, these estimates are lower in all years than reported in the 1984 advice from ICES. The largest portion of the discrepancy between the estimates is due to changes in the estimate of total tag returns and run size in Maine rivers.

A sensitivity analysis showed that the estimated harvest in Newfoundland-Labrador fisheries was particularly dependent on the values adopted for the reporting rate for tags in those fisheries and for the exploitation rate in Maine rivers where there was no counting fence.

4.2.2 Description of fisheries catching salmon originating in another country's river or artificial production facility

Most salmon of the United States' origin taken in Newfoundland and Labrador fisheries were caught in gill-nets. Small numbers were taken from salmon traps, cod traps and mackerel nets, and one tag recovery was reported from a rod. The descriptions of fisheries provided in ICES 1984 advice remain valid for those fisheries still in operation. In 1985, Canadian regulations were enacted to prohibit commercial salmon fishing in New Brunswick, Nova Scotia and Prince Edward Island in addition to the 1984 regulations, which prohibited the retention of salmon in non-salmon commercial fishing gear and the closure of part of southern Newfoundland to commercial salmon fishing.

4.2.3 By-catch and poaching of Atlantic salmon

It is difficult to assess the extent of by-catch and poaching in Canadian and USA fisheries. It was noted that most poaching in the USA and Canada occurs in freshwater and would, therefore, have a small impact on the estimate of interception of USA-origin salmon. The extent of poaching in salt water is not known. Some salmon caught by poaching may be included in the catch statistics. Estimates provided by state and federal biologists suggest that by-catch in northeastern USA waters is in the order of 2% of Atlantic salmon returning to USA waters. Prior to 1984, by-catches in Newfoundland waters were included in Atlantic statistics, as they were in the Maritime Provinces before 1983. Since 1984, Canadian commercial fishermen have been required to release all Atlantic salmon taken as by-catches. The extent to which this has reduced mortality is unknown.

4.2.4 Tag reporting procedure and tag return data

Examination of tag reporting procedures revealed no major problem at the present time. Information reported with tag returns is frequently incomplete, however.

4.2.5 Expected impact of management measures taken by Canada in 1984 on Canadian harvest of USA-origin salmon

Season and area closures in Canadian salmon fisheries and a reduction in licenced fishing effort in Newfoundland and Labrador influenced the number of USA-origin salmon taken in Canadian fisheries. The impact of these measures was calculated relative to a base period of 1970 to 1982 smolt classes. The overall reduction in the Canadian harvest of USA salmon due to reductions

in season and closures of areas during 1985 was estimated to be about 11% relative to that base (1970-82 smolt classes). Although licenced fishing effort has been reduced due to regulations by about 31% between the historical average and 1985 and catch in fact declined by more than 31%, the decline in catch was also influenced by reduced abundance of salmon. The amount of reduction in catch and interception attributed to reduced licenced fishing effort was expected to be less that 31% and could not be quantified. It was noted that 2% of the 11% estimated reduction of harvest of USA-origin salmon due to season changes and closures occurred at Newfoundland. Closures at Newfoundland but not season changes are implicitly included in the reduction of licenced fishing effort there; thus, the impacts of the two measures are not directly additive.

4.2.6 Data deficiencies and research program

The Working Group report (Section 2.7) identifies data deficiencies particularly in relation to statistics of catch and fishing effort, non-catch fishing mortalities and tag reporting rates. Remedial measures proposed are endorsed by the ACFM.

ANNEX 9

JUNE 1986
EDINBURGH

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)18

SCIENTIFIC ADVICE FROM ICES

THE REPORT OF THE ADVISORY COMMITTEE ON FISHERIES MANAGEMENT (ACFM) (SECTIONS 1 - 3 AND 4.1 - 4.7)

This paper makes reference to the report of the meeting of the ICES Working Group on North Atlantic Salmon (Copenhagen, 17-26 March 1986). That report is not annexed here but is available on request to the Secretariat.

ACFM REPORT
NORTH ATLANTIC SALMON

1. REQUEST FOR SCIENTIFIC ADVICE

The advice below and the appended report of the Working Group on North Atlantic Salmon respond to questions posed by ICES and the Council of the North Atlantic Salmon Conservation Organisation (NASCO). ICES requested: a) estimates of nominal catches (tonnes) of salmon in home waters; b) estimates of the catch of salmon in numbers by sea age for recent years; c) an assessment of the impact of non-tagged, adipose fin-clipped salmon on the detection of coded wire tags; and d) an evaluation of the concept of "Safe Biologial Limits" in terms relevant to Atlantic salmon. NASCO posed questions in relation to the areas of its Commissions; these questions are listed for each of the Commission areas in Appendix I of the Working Group report. Every question posed is addressed below together with a summary of scientific advice. The Working Group report should be consulted for detailed reponses to the ICES and NASCO requests. In this text, all tables and numbered figures referred to are found in the Working Group report.

2. NOMINAL CATCHES OF SALMON IN HOME WATERS

Nominal catches of salmon in home waters (in tonnes round fresh weight) for 1960-85 are presented, by country, in Table 1. The total provisional reported catch in 1985 was 5,864 tonnes, similar to the 1984 total catch of 5,624 tonnes but lower than annual catches in the early 1980's (6,200-8,000 tonnes). In 1985, for the first time, an estimate of unreported catch was provided (3,070 tonnes). No attempt was made to estimate unreported catches for earlier years.

3. CATCH IN NUMBER BY SEA AGE AND WEIGHT FOR RECENT YEARS

Estimates of national salmon catches, in terms of numbers and weight by sea age, are given in Table 2 for the 1980-85 period. Data were provided from nine countries for one or more years in the recent time period. Sea age was generally assigned as either 1 sea-winter (1SW) or multi sea-winter (MSW). For each country, age and catch estimation procedures were described.

4. QUESTIONS OF INTEREST TO THE NORTH AMERICAN COMMISSION OF NASCO

4.1 Historical Catches of Salmon Originating in Rivers and Artificial Production Facilities of Another Country

Estimates of numbers of 1SW Atlantic salmon of Maine origin caught in Newfoundland-Labrador fisheries from 1971-83 were revised and extended to 1984 (Tables 4-6). The estimated 1984 harvest of 1,303 fish (derived from tag recoveries in Newfoundland-Labrador in 1984 and total run size, tagged fish returns and harvest data for Maine rivers in 1985) was slightly below the 1981-83 mean of 1,400 fish. The 1985 run size of 2SW salmon in Maine was 4,320 fish, almost 80% above the 1972-84 average of 2,416 fish.

4.2 Description of Fisheries Catching Salmon Originating in Another Country's Rivers or Artificial Production Facilities

Salmon of USA origin have historically been taken in Newfoundland and Labrador, Nova Scotia, New Brunswick and, to some extent, Québec. Preliminary 1985 landings of salmon in Newfoundland-Labrador totaled 832 tonnes; Québec commercial landings were 70 tonnes (Table 7). During 1985, the commercial salmon fishery was closed in New Brunswick, Nova Scotia and along the southern shore and parts of the northern shore of the Gulf of St. Lawrence in Québec.

4.3 By-Catches and Poaching of Atlantic Salmon

No new information was available on by-catch and poaching of salmon.

4.4 Tag Recovery Procedures and Tag Return Data

No new information on tag recovery procedures or tag reporting rates was available.

4.5 Salmon Tags Captured but Not Reported

No new material was provided.

4.6 Estimated Impact of Management Measures Taken by Canada in 1984 and 1985 in Reducing the Harvest of USA-Origin Salmon

Canadian salmon fishery regulations changed substantially in 1984 and 1985 with closure of some fisheries and reduced seasons and licensed fishing effort in others. By 1985, licensed effort in the Newfoundland-Labrador fishery had been reduced to 14,300 units due to new regulations (a 31% decline relative to the 1971-83 average of 20,172 units) and reported catch declined to 832 tonnes, a 50% reduction from the 1971-83 average of 1,655 tonnes. The effect of reduced effort on catch, however, is, to some extent, con founded by fluctuations in salmon abundance; for example, about 1/4 of the reduction in effort occurred between 1984 and 1985 while reported landings rose from 821 to 832 tonnes.

In November 1985, the ACFM noted that the reduction in total catch, and in the harvest of USA-origin salmon attributed to reduced licensed fishery effort was expected to be less than 31%. It was also noted that 2% of the 11% estimated reduction of Canadian harvest of USA-origin salmon, due to season changes and closures, occurred at Newfoundland. Closures of some Newfoundland fisheries, but not season changes, are implicitly included in the reductions of licensed fishing effort there. Thus, the impacts of the two measures are not directly additive.

As another means of evaluating the impact of recent Canadian salmon management measures, recent harvest estimates of USA-origin salmon at Newfoundland were compared to salmon run size estimates in Maine the following year (Table 6). Between 1983 and 1984, the estimated harvest of Maine-origin salmon in Newfoundland decreased by about 600 fish (1,901 to 1,303: -32%) and

the run size of 2SW salmon of the same smolt classes rose by about 1,500 fish (2,848 to 4,320: +52%). The 1984 harvest of Maine-origin salmon at Newfoundland was, however, only slightly below the 1971-83 mean of 1,400 fish. The decline in ratio of harvest to run size for these two Maine smolt classes (0.667 to 0.302: -55%) is consistent with the management measures adopted by Canada, but the ACFM could not conclude that it was caused by these management measures since there have been wide fluctuations in harvest/run size proportions between years.

4.7 Data Deficiencies and Research Needs

Research needs identified previously were reviewed and progress noted on each item (Table 32). Additional data and research program requirements were also specified and discussed.

ANNEX 10

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

TEXT OF THE REGULATION OF THE NORTH AMERICAN COMMISSION OF NASCO
(contained in the telex issued by the Secretary, 31 July 1986)

1. The Secretary of NASCO has the honour to inform the members of the North American Commission that the Commission, at its meeting during 23-27 June 1986 in Edinburgh, adopted a proposal for the following regulatory measure:

   The closure of the 1986 commercial fishing seasons for the province of Newfoundland and Labrador on 15 October 1986.

2. Under Article 13, paragraph 2, of the Convention, this measure shall become binding on its members sixty days after the date of this notification, unless an objection to it is lodged, in accordance with Article 13, paragraph 2. This notification is dated 31 July 1986.

3. This notification has been copied to other parties to the Convention.

Malcolm Windsor
Secretary

ANNEX 11

JUNE 1986
EDINBURGH

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)14

QUESTIONS FROM NASCO TO ICES

With respect to Atlantic salmon in the North American Commission area, ICES is requested to:

(a) provide estimates of the number, weight, age composition and river of origin of historical catches from 1967-1985 of salmon originating in rivers or artificial production facilities of another country. These estimates should be broken down by sea-age, standardized week, locality and gear type. The estimates should also take into consideration available information on the release and recovery of tagged salmon and catches and exploitation rates for salmon in areas where such catches occur;

(b) provide a description of fisheries catching salmon originating in another country's river or artificial production facility. The description should include catch, effort, exploitation rates, gear type, season and age composition of historical catches of salmon by year;

(c) develop research procedures to assess the proportion of salmon tags captured but not reported;

(d) specify data deficiencies and necessary research programmes to address those deficiencies;

(e) estimate the impact of management measures taken by Canada in 1984 and 1985 and the expected impact of those taken in 1986 in reducing the harvest in Canadian fisheries of salmon originating in the USA;

(f) review existing tag reward systems and make recommendations on standardising payments, national clearing house arrangements and review cooperative tag recovery systems in the NASCO area;

(g) examine methods of stock identification such as scale structures to separate stocks in mixed stock fisheries;

(h) provide a description of sport fisheries for Atlantic salmon in Maine, USA including effort statistics for these fisheries by river system and refine the estimates of exploitation rates for these fisheries;

(i) develop research procedures to estimate non-catch fishing mortalities in marine fisheries in Canada and the US, and in the Maine sport fisheries.

In addition, with respect to the issue of acid rain, the following questions:

1. Identification of freshwater habitats which support or have supported Atlantic salmon populations and classification of these habitats in relation to their vulnerability to loss of productivity of Atlantic salmon due to acidification.

2. Trends in acidification of habitat identified in question 1, and in the fish populations supported by those habitats.

3. The influence of acidification of freshwater habitat on growth and survival of Atlantic salmon fry and parr and the implications for smolt and adult production.

4. The effectiveness of mitigation measures such as liming and the extent to which these measures are in current use.

ANNEX 12

JUNE 1986
EDINBURGH

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)15

TERMS OF REFERENCE FOR NASCO BILATERAL SCIENTIFIC WORKING GROUP ON SALMONID INTRODUCTIONS AND TRANSFERS

1. To advise on matters related to the introduction or transfers of salmonid species which may potentially affect the health and genetic stability of Atlantic salmon stocks in Canada and the United States.

2. To develop and review, on demand, existing or proposed policies and protocols relating to the introduction or transfer of salmonids in Canada and the United States with respect to their potential impacts, both positive and negative, on existing salmonid populations.

3. To review all non-indigenous salmonid introductions in relation to the ICES "Revised Code of Practice to Reduce the Risks of Adverse Effects Arising from Introduction on Non-indigenous Marine Species".

4. To evaluate existing mechanisms and advise on new mechanisms that might be put in place to ensure adherence to the above mentioned ICES Revised Code of Practice in future programs by member nations.

5. To maintain an inventory on all introductions and transfers of all salmonids into the Great Lakes and the Atlantic coast of North America since 1975.

6. To comment on the potential for adverse genetic and disease impacts on wild Atlantic salmon stocks resulting from proposed introductions of Pacific salmonids and proposed transfers or introductions of Atlantic salmon.

7. To recommend terms of reference or questions which might be referred to the ICES Working Group on Introductions and Transfers of Marine Organisms or the ICES Working Group on Genetics and, if required, co-operate in joint meetings with the ICES Working Group to consider questions of mutual interest.

ANNEX 13

JUNE 1986
EDINBURGH

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

NORTH AMERICAN COMMISSION

NAC (86)16

PROPOSAL TO ESTABLISH A JOINT WORKING GROUP TO REVIEW THE EFFECTS OF ACID RAIN ON ATLANTIC SALMON

A bilateral working group of Canadian and USA scientists should be formed to consider the extent and implications of acidification of freshwater salmon habitat in the North American Commission Area and to advise NASCO regarding:

1) Identification of freshwater habitats which support or have supported Atlantic salmon populations and classification of these habitats in relation to their vulnerability to loss of productivity of Atlantic salmon due to acidification.

2) Trends in acidification of habitat identified in question 1, and in the fish populations supported by those habitats.

3) The influence of acidification of freshwater habitat on growth and survival of Atlantic salmon fry and parr and the implications for smolt and adult production.

4) The effectiveness of mitigation measures such as liming and the extent to which these measures are in current use.

ANNEX 14

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
THIRD ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION
5-6 FEBRUARY 1986, CONCORDE HOTEL, QUEBEC CITY, CANADA
AND 23-27 JUNE 1986, SHERATON HOTEL, EDINBURGH, UK.

LIST OF NORTH AMERICAN COMMISSION PAPERS

PAPER NO	TITLE
NAC (86)1	Provisional agenda
NAC (86)2	Draft agenda
NAC (86)3	ACFM report from ICES on salmon stocks
NAC (86)4	Agenda
NAC (86)5	1985 Canadian Atlantic Salmon Management Plan
NAC (86)6	Canadian Atlantic Salmon catches (tonnes)
NAC (86)7	Status of Atlantic Salmon stocks in Atlantic Canada and advice for their management in 1986
NAC (86)8	1985 New England salmon program
NAC (86)9	Draft questions from NASCO to ICES, June 1986
NAC (86)10	Suggested terms of reference for a NASCO bilateral scientific working group on salmonid introductions and transfers
NAC (86)11	Draft report of the third annual meeting of the North American Commission
NAC (86)12	Election of officers
NAC (86)13	Designation of meeting
NAC (86)14	Questions from NASCO to ICES, June 1986
NAC (86)15	Terms of reference for a NASCO bilateral scientific working group on salmonid introductions and transfers

NAC (86)16	Proposal to establish a joint working group to review the effects of acid rain on Atlantic salmon
NAC (86)17	Report of the third annual meeting of the North American Commission
NAC (86)18	ACFM report from ICES on salmon stocks

NOTE: This list contains all papers submitted to the Commission prior to and at the meetings. Some, but not all, of these papers are included in this report as annexes.