CNL(05)11

Report of the Fourth Meeting of the International Atlantic Salmon Research Board

6 June 2005, Palais des Congrès, Vichy, France

1. Opening of the meeting

1.1 The Chairman, Mr Jacque Robichaud, opened the meeting and welcomed Members of the Board, their scientific advisers and the representative of the accredited NGOs, Mr Chris Poupard, to Vichy. He indicated that, as agreed by the Board at its last meeting, fund-raising and management consultants had been employed to develop a fund-raising strategy and that representatives of Brakeley Consultants would be participating in the discussions under agenda item 7, so as to report their findings. In order to facilitate a broader debate and coordination of the Board's main tasks, review of the SALSEA programme and the search for new funds, these two items would be considered in open sessions.

1.2 A list of participants (excluding those who attended only the Open Session) is contained in Annex 1.

2. Adoption of the agenda

2.1 The Board adopted its agenda, ICR(05)7 (Annex 2).

3. Election of Chairman

3.1 The Board re-elected Mr Jacque Robichaud as its Chairman.

4. Inventory of Research

4.1 At its inaugural meeting the Board had developed an inventory of research relating to salmon mortality at sea, CNL(01)21, which had been updated in 2003, ICR(03)3, in 2004, ICR(04)3 and ICR(04)6, and again in 2005, ICR(05)3. A summary of the updated inventory had been made available to the ICES Working Group on North Atlantic Salmon for information purposes so as to assist it in identifying data deficiencies, monitoring needs and research requirements. This inventory had also been made available to the Board's Scientific Advisory Group (SAG) to assist it in identifying gaps in research and research priorities and to develop recommendations for enhanced coordination of existing research (see section 5 below).

4.2 The Assistant Secretary, Dr Peter Hutchinson, made a brief presentation on the inventory. He noted that maintenance of this inventory is required under the Board's Rules of Procedure and is considered an essential tool in identifying research gaps and priorities and in improving coordination of existing research. It is also important in demonstrating to potential funders the extent of existing commitments by the Parties and the nature of the on-going research programmes. As requested by the Board at its last meeting, a number of changes had been made to the format for requesting information to update the inventory and to the presentation of this information,

including development of a table of annual expenditure by topic area and Party. The updated inventory includes a total of 54 on-going and 9 completed projects. Since last year, 2 projects had been completed and 12 new projects added. One EU Member State (Sweden) had included information in the inventory for the first time in 2005 and there is now information for most EU Member States with salmon interests (Denmark, France, Finland, Ireland, Sweden, UK). The total annual expenditure on the on-going projects included in the inventory amounts to about £5.7 million, an increase of 24% compared to 2004. No costings were available for 7 of the projects.

4.3 He advised the Board that the inventory had been thoroughly reviewed by the Scientific Advisory Group which had developed a number of recommendations which would be presented by the Group's Chairman.

5. Report of the Scientific Advisory Group

5.1 The report of the third meeting of the Board's Scientific Advisory Group (SAG) was presented by its Chairman, Mr David Meerburg (Canada), SAG(05)4 (Annex 3). The Group had reviewed the updated inventory of research, considered a progress report on the SALSEA programme and elected a new Chairman.

5.2 The SAG recommends to the Board that when the inventory is next updated:

- the Board should seek information from the French authorities on the sampling programme at St Pierre and Miquelon according to the agreed inventory reporting format;
- the Secretariat should indicate which Work Package and Task in the SALSEA programme each project in the inventory relates to;
- the Board Members should be asked to provide a breakdown of the funding between public and private sector partners for projects involving such collaboration;
- any projects that have not been updated and no longer appear to be current should be included as completed projects, following consultation between the Secretariat and the Board Member concerned;
- it should be made clear in the inventory that while project costings are allocated to the Party or EU Member State coordinating the research, there may also be financial contributions to the research by collaborating countries.

5.3 The Board agreed to these recommendations and asked that Board Members provide details of any additional projects and updated information for inclusion in the inventory to the Secretariat by 30 June and that after that date the inventory should be made available on the Board's website. The Board also agreed that for completed projects, information should only be presented in the inventory in the year of completion, and thereafter the information should be held in a separate database.

5.4 The SAG had also considered a number of questions in relation to the SALSEA programme but recognized that it would be difficult to provide an objective review of the programme since almost all participants in the SAG meeting had been involved in the Workshop to develop the SALSEA programme. The SAG had recognized the comprehensive nature of the programme and believe that it is technically feasible (subject to the development work identified) and economically justifiable given the enormous value of Atlantic salmon stocks. The SAG had recommended to the Board

that there should be an external review of the SALSEA programme and had proposed two approaches for such a review involving scientists from the Pacific and through the Diadromous Fish Committee of ICES.

5.5 Finally he reported that he was not able to be considered for re-election as Chairman of the SAG and that Dr Malcolm Beveridge (European Union) had been unanimously elected as its Chairman. The Board thanked Mr Meerburg for his work in chairing the SAG since its inception.

6. The SALSEA Programme

(a) Report of the Dublin meeting (Open Session)

6.1 At its last meeting the Board had agreed to organise and sponsor a workshop to further develop a major programme of research on salmon at sea, drawing on the SALSEA project but involving scientists from North America and more widely in Europe. Dr Ken Whelan and Mr David Meerburg had been asked to develop a Plan of Action for the Workshop, which was held in Dublin, Ireland, during 12-15 October 2004. The Chairman, Dr Ken Whelan, introduced the report of the Workshop, ICR(05)2. The Workshop had developed an international cooperative research programme on salmon at sea, SALSEA, which comprises a series of Work Packages and Tasks to examine key hypotheses, differentiating between those Tasks which can be achieved through enhanced coordination of existing on-going research, and those involving new research for which funding would be required.

6.2 He noted that success in implementing SALSEA will require coordination of on-going programmes, additional or redirected core national funding from NASCO's Parties, and additional private-sector funding. Two Work Packages, concerning support technologies (genetic stock identification, enhanced efficiency of sampling gear at sea and standardized scale analysis techniques) and investigating the distribution and migration of salmon at sea, have been identified as the priority areas for fund-raising. It is assumed that research in the inshore zone will continue to be carried out by the Parties but with enhanced levels of cooperation and coordination of research. The cost of these two priority Work Packages (assuming two years of research cruises) is in the region of £7.8 million. A third year of cruises would bring this total for the programme to about £10.5 million.

6.3 The Board recognized that the SALSEA programme should lead to a much clearer understanding of the factors affecting mortality of salmon at sea and the opportunities to counteract that mortality. However, it is aware that, unlike factors affecting mortality in fresh water, which may be addressed through management action, there may be limited opportunities to counteract mortality of salmon at sea. Nonetheless, the Board recognized that there was a need to better understand the factors affecting salmon at sea, given the large increase in mortality in the last twenty years compared to the 1970s and 1980s and that the information derived from implementing the SALSEA programme should support rational salmon management in future. The Board noted that there is considerable information from tagging experiments and post-smolt surveys and available in scale collections that could be more fully analysed and that this could assist in planning and implementing the SALSEA research cruises. It was also noted that given the existing commitments for the Parties' research vessels, it might be difficult to obtain ship time for the SALSEA programme and that

chartering of vessels might be necessary if funding for the SALSEA programme is forthcoming.

(b) Future Actions

(i) Immediate Next Steps (within 6 months)

6.4 The Board fully endorsed the SALSEA programme and noted that its implementation would require funds of approximately £7.8 million or £10.5 million, depending on whether there are two or three years of research cruises. These funds could either be raised from the NASCO Parties or through fund-raising (see paragraph 7.6) including public/private partnerships. The Board agreed that the immediate next steps with regard to the SALSEA programme should be:

- for the NASCO Secretariat to allocate research projects in the inventory of marine research to the various SALSEA Work Packages and Tasks so as to better identify elements of the programme that are already on-going;

- to arrange for a peer review of the SALSEA programme. The Chairman was asked to write to Drs Helle and Beamish, both of whom have extensive experience of research on Pacific salmon, inviting them to review the SALSEA programme and outlining the background to the programme and the reasons for seeking the review;

- to arrange further communication of the SALSEA programme to ICES to raise awareness of the programme and to seek support for, and feedback on, the programme from scientists working on diadromous fish, and from the broader community of marine scientists in relation to SALSEA's relevance to the ecosystem approach. Dr Niall O'Maoileidigh, Chairman of the ICES Diadromous Fish Committee, had agreed to make appropriate arrangements within ICES;

- to correct and update the SALSEA programme in the light of any feedback received from the reviewers. This work should be undertaken by correspondence or conference communication unless extensive changes are required, when a meeting of the SAG could be held in conjunction with other NASCO or ICES meetings scheduled for the late autumn.

6.5 While the review process referred to above is ongoing, the NASCO Secretariat should review the Board's funds, in consultation with Board Members, in order to determine the sums available for fund-raising and those which can only be spent on research-related activities. An early indication is that most of the Board's current funds can only be used for research. Once the sums already available are known, research priorities and timescales for the use of the funds available for research should be identified and the research initiated at the earliest opportunity so as to demonstrate to the Parties and potential fund-raisers further progress with implementing the SALSEA programme. The planning and initiation of this research should be coordinated by the SAG. Decisions regarding prioritizing of research activities should be made by the Board. The report presented to the Board on the SALSEA programme indicated that there are several research coordination Workshops that should be considered by both the SAG and the Board pending the peer review of the programme.

6.6 The Board should make appropriate arrangements for greater NGO involvement in the work of the Board and in implementing the SALSEA programme.

(ii) Longer-term Actions

6.7 There is a need for the Board and its SAG to develop detailed time-lines and costings for the major components of the SALSEA programme (i.e. oceanic research cruises) based on various possible funding scenarios (e.g. £7.5 million available in 2007, £4 million available in 2008, etc.). The Board should then seek further funds from the Parties for these major components (either in money or in kind) or restricted funding (up to £200,000 required over a two-year period) to allow a fund-raising programme to be undertaken. Alternative approaches for obtaining the funds could also be considered, such as approaching other sources, e.g. the EU Seventh Framework Programme, NGOs, and a phased approach to fund-raising through consultants. If the funds for SALSEA are to be obtained through a fund-raising programme the Board will also need to work with consultants to develop marketing material for the SALSEA programme and to communicate the SALSEA programme and funding options to the Parties and NGOs. Subject to funds being available, the major elements of the SALSEA programme should be implemented.

6.8 It is recognized that taking the SALSEA programme forward is a major undertaking and there may be a need for the Board and/or the SAG to meet prior to the next Annual Meeting of NASCO in order to accomplish some of the tasks identified above. The scientific meetings referred to in paragraph 6.4 might be an opportunity for the SAG to meet. The Secretariat and Chairman will also have a key role to play in coordinating these next steps.

7. The search for new funds

(a) Consultants' report on a fund-raising strategy (Open Session)

7.1 Last year a report was made to the Board on initial fund-raising efforts by the Chairman and Secretary. It was noted that fund-raising is a very specialized activity, that it is likely to be a slow process, and that there are many competing interests for the funds available. The Board had agreed that it would be helpful to have some professional assistance in developing a fund-raising strategy. Since last year, a firm of fund-raising and management consultants, Brakeley Consultants, based in London, UK, had been engaged to develop a fund-raising strategy. Brakeley's client list includes arts and cultural institutions, environmental organizations, medical centres and hospitals and educational facilities.

7.2 The Chairman introduced Mr William Conner, Mr David Morris and Mrs Anne Voboril Conner of Brakeley Consultants, who presented a report to the Board, ICR(05)8 (Annex 4). This report had concluded that, in the SALSEA programme, the Board had a positive and urgent case, with objectives that meet this urgency and wide potential sources of funding (although they considered that the majority of the funds would be raised from a small number of sources). On the negative side, they considered that there was limited potential to raise money with the current structure of the Board, the target of £7.5 million was too high, there was a lack of a strategy to make the most of the relationship with NASCO's NGOs and additional government

funding would be essential as leverage for funding from the private sector. They therefore recommended that, as the next steps, additional funding of £4 million should be sought from NASCO's Parties and that a professionally managed fund-raising programme should be initiated with the objective of raising £4 million over a five-year period. The focus of the fund-raising initiative should be the SALSEA programme and the NGOs should be involved in the fund-raising effort. A communications programme would be required to support the fund-raising effort.

7.3 Following a period of discussion, the Chairman thanked the representatives of Brakeley Consultants for their detailed and informative presentation.

7.4 The Secretary indicated that Brakeley Consultants had advised him that the cost of implementing a professionally managed fund-raising initiative would be in the region of £100,000 per annum over a period of two years, although it would be necessary to seek a proposal and detailed costing from Brakeley Consultants for implementing this initiative. He indicated that he had been advised that fund-raising consultants no longer consider it ethical to charge on the basis of a proportion of the funds they raise. The Board recognized that it would be desirable to use professional expertise in any fund-raising initiative rather than employing a staff member in the Secretariat and that the consultants' role would be to identify possible sources of funding, develop relationships with potential funders and then make introductions so that representatives of the Board could present the SALSEA programme to them.

(b) Future actions

(i) Immediate Next Steps

7.5 The Board agreed that the first step should be to fully review the report from Brakeley Consultants, ICR(05)8, and to coordinate views from the Board Members on the way forward with regard to the fund-raising approach. Based on recommendations from Brakeley Consultants, the Board should agree on appropriate representation on the Board and involvement in the fund-raising effort.

(ii) Longer-term Actions

7.6 In the event that the Parties do not agree to fund the SALSEA programme either fully or in partnership with private organizations, the only way to proceed will be through fund-raising, although implementation of Work Package 1 could begin with less funding and some Parties may initiate parts of Work Package 3 on their own. A fund-raising effort on behalf of the Board will require commitment by the Parties for a minimum of two years with resources of £100,000 per annum (see paragraph 7.4). It is possible that donations could be received by the Board after one year and there would then be a need to review if a second year of commitment by the Parties is required. If a fund-raising programme is initiated, the Board should establish a fund-raising sub-group to lead the fund-raising process in line with the recommendations from Brakeley Consultants.

8. Finance and administrative issues

8.1 Under Rule 14 of the Board's Rules of Procedure, ICR(05)4, it is stated that the Rules of Procedure "may be subject to review by the Council of NASCO at any time and should be reviewed no later than 2005". Since their adoption in 2001 the Rules of

Procedure have not been reviewed or amended other than to reflect the change in name of the Board to the International Atlantic Salmon Research Board. The Board noted that there had been some changes to the Rules such as those concerning NGO participation in its meetings which needed to be reflected in document ICR(05)4 and that further changes might be needed in the light of the fund-raising consultants' recommendations. The Board agreed that the rules should be reviewed more thoroughly at its next meeting.

8.2 The Secretary reported that the Board's financial statements for the year to 31 December 2004 had been sent to all Members of the Board but, following consultations with Board Members, these had not been audited because there had been very few transactions in the year and the price quoted by the auditors had been high. The major expenditure during 2004 had been the cost of organising the SALSEA Workshop. At the end of the 2004 financial year the balance of the fund amounted to approximately £122,000 following receipt of contributions in 2004 from the US (approximately £83,000), Iceland (£2,800) and the NASCO budget (£18,000). A contribution of £10,000 had been received from Norway in 2003. Since the year-end there had been some additional minor costs associated with the SALSEA Workshop but the major expenditure had been the cost of developing a fund-raising strategy (approximately £18,000 to date). A contribution had been received from Canada (approximately £2,000) and, allowing for interest, the fund balance as of 1 May 2005 was £107,000 but this would be reduced to around £100,000 following the final payment to the fund-raising consultants for the preparation of their report, ICR(05)8. The EU indicated that it expected to make a payment of Euro 50,000 (approximately £30,000) to the fund in the near future. The Board recognized that some of these funds (e.g. US and Canadian contributions) could only be spent on research work while others could be available for research work or fund-raising activities.

8.3 The Board noted that the fund had not been audited since its establishment and agreed that an audit should be conducted at the close of the 2005 financial year. In accordance with the Board's financial rules the audited report will be made available to all Members of the Board for their acceptance. It was agreed that the Chairman should provide a brief overview of the finances of the Board in his report to the Council. The Board's audited accounts will be freely available. Last year the representative of the accredited NGOs had indicated that the NGOs may be able to assist with identifying target individuals and companies for fund-raising and by offering the services of an honorary auditor. Mr Poupard agreed to take this matter up again within the NGO group.

9. Other business

9.1 There was no other business.

10. Report of the meeting

10.1 The Board agreed the report of its meeting.

11. Date and place of next meeting

11.1 The Board will agree the date and place of its next meeting by correspondence.

11.2 The Chairman thanked participants for their contributions and closed the meeting.

Annex 1

List of Participants

Chairman of the Board

Mr Jacque Robichaud

Canada

Mr Guy Beaupré
Mr David Meerburg

Denmark (in respect of the Faroe Islands and Greenland)

Dr Jan Arge Jacobsen
Mr Andras Kristiansen

European Union

Dr Malcolm Beveridge
Mr Ted Potter
Mr Andrew Thomson

Iceland

Mr Arni Isaksson

Norway

Mr Raoul Bierach
Mr Arne Eggereide
Dr Lars Petter Hansen

Russian Federation

Dr Svetlana Krylova
Dr Boris Prischepa
Ms Elena Samoylova
Dr Igor Studenov

USA

Mr Pat Scida
Mr Stetson Tinkham

Non-Government Organizations

Mr Chris Poupard

Secretariat

Dr Malcolm Windsor
Dr Peter Hutchinson

Annex 2

ICR(05)7

Fourth Meeting of the International Atlantic Salmon Research Board

at 10.00am on Monday 6 June, 2005
Palais des Congrès, Vichy, France

Agenda

1. Opening of the meeting

2. Adoption of the agenda

3. Election of Chairman

4. Inventory of Research

5. Report of the Scientific Advisory Group

6. The SALSEA Programme

   (a) Report of the Dublin meeting
   (b) Future actions

7. The search for new funds

   (a) Consultants' report on a fund-raising strategy
   (b) Future actions

8. Finance and administrative issues

9. Other business

10. Report of the meeting

11 Date and place of next meeting

Annex 3

SAG(05)4

Report of the Third Meeting of the Scientific Advisory Group of the International Atlantic Salmon Research Board

Palais des Congrès, Vichy, France
Sunday 5 June 2005

1. Opening of the Meeting

1.1 The Chairman of the Scientific Advisory Group (SAG), Mr David Meerburg (Canada), opened the meeting and welcomed members of the group to Vichy.

1.2 A list of participants is contained in Annex 1.

2. Adoption of the Agenda

2.1 The SAG adopted its agenda, SAG(05)3 (Annex 2).

3. Election of Chairman

3.1 Mr Meerburg indicated that he was not able to be considered for re-election. The SAG unanimously elected Dr Malcolm Beveridge (European Union) as Chairman.

4. Review of the updated inventory of research and recommendations for enhanced coordination of research

4.1 The SAG reviewed the updated inventory of research relating to salmon mortality in the sea, ICR(05)3. The Assistant Secretary of NASCO, Dr Peter Hutchinson, provided an overview of the inventory, which is considered by the Board to be an essential tool in identifying research gaps and priorities and in improving coordination of existing research. In 2005, 54 ongoing and 9 completed projects had been included in the inventory and the annual expenditure on the ongoing projects was in excess of £5.7 million, although no costings had been provided for 7 projects. A number of projects are, however, close to completion. He noted that an increasing number of EU Member States are contributing information to the inventory and that information is now available for Denmark, France, Finland, Ireland, UK and Sweden. Since the last update, 12 new projects had been included and 2 projects had been completed. He indicated that no updated information had been provided for some ongoing projects and only partial information had been provided for some others. As requested by the Board at its last meeting, guidance notes on updating the inventory had been developed and a number of changes had been made to the presentation of the information. Following this brief overview, each Party gave a more detailed summary of its research projects.

4.2 The SAG noted that for projects involving collaboration between two or more countries, some of the project costs may be incurred by Parties other than the coordinating Party, and that this should be made clear in subsequent updates of the

inventory. The SAG also noted that the sampling programme at St Pierre and Miquelon referred to in Council paper CNL(05)28 is not included in the inventory. While France (in respect of St Pierre and Miquelon) is not a Party to NASCO, the sampling programme is being undertaken by French scientists from IFREMER in collaboration with Canadian scientists. The SAG therefore recommends that, in view of the French authorities' indication that they are keen to cooperate with NASCO, the Board should seek to obtain information from them on this sampling programme, according to the agreed reporting format, for inclusion in the inventory. The SAG also recommends that when the inventory is next updated, the Secretariat should indicate which Work Package and Task in the SALSEA programme the project relates to so that those areas of the programme which are already being addressed, at least in part, through ongoing research, and gaps in the SALSEA programme, can be identified. The SAG also noted that in addition to collaboration between Parties, there is collaboration between public and private-sector organizations on a number of the projects in the inventory. The SAG recommends that when the inventory is next updated, the Board Members should be asked to provide a breakdown of the funding between the private and public sectors, to the extent possible, and that the collaborating partners should be identified in the summary tables.

4.3 The SAG also recommends that when the inventory is next updated, any projects that have not been updated and no longer appear to be current should be included as completed projects, following consultation between the Secretariat and the Board Member concerned. The SAG also noted that there may be additional projects and updated information that could be included in the inventory and that Board Members should be requested to provide this information to the Secretariat by 30 June. Thereafter the inventory should be made available on the Board's website.

4.4 The SAG members discussed whether there is a need to consider a more formal mechanism for coordinating ongoing research, for example by appointment of a funded technical position, or whether the existing approach is adequate. The view was expressed that there may be very limited opportunities to reallocate funds from existing ongoing programmes but that a more formal approach to coordination might be appropriate for any new funds that are raised by the Board in support of the SALSEA programme. In the event that new funding is raised to support this programme, the SAG recognized the desirability of allocating expenditure so as to ensure that the research is conducted at the most appropriate research facility and by bringing in the researchers best qualified to test key hypotheses in relation to mortality of salmon at sea.

4.5 The SAG noted that there is apparently only one project in the inventory concerning development of methods and that key areas such as sampling equipment development, genetic stock identification and scale analyses had been identified in the SALSEA programme. Progress on these areas for further development is crucial to the success of the SALSEA programme.

4.6 Reference was made to a recent publication entitled "The Norwegian Sea Ecosystem" edited by H.R. Skjoldal which contains valuable information on research on salmon at sea.

5. The SALSEA Programme

5.1 At its last meeting the SAG had reviewed progress in development of the SALSEA programme. The SAG had welcomed the programme but noted that there had been no North American scientists involved in its development and some European countries had not contributed to it. The SAG had recommended to the Board that it support the further development of the SALSEA programme through organizing and funding a Workshop. The Board had agreed to this proposal and the Workshop to further develop SALSEA was held in Dublin, Ireland, during 12-15 October 2004. The Chairman of the Workshop, Dr Ken Whelan, presented the report of the meeting, ICR(05)2. He indicated that the SALSEA programme contains a comprehensive mix of freshwater, estuarine, coastal and off-shore elements ensuring a comprehensive overview of factors which may affect the marine mortality of salmon. The programme comprises four Work Packages designed to test key hypotheses about factors influencing mortality of salmon at sea. These Work Packages are as follows:

Work Package 1	Supporting technologies (genetic stock identification, sampling, equipment evolution and scale growth history);
Work Package 2	Early migration through the inshore zone;
Work Package 3	Investigating the distribution and migration of salmon at sea;
Work Package 4	Communications.

5.2 He noted that it is intended that Work Package 2 should be carried out and funded by the Parties but with a greater level of cooperation and coordination of the research. The estimated cost of Work Packages 1 and 3 is approximately £7.8 million over approximately five years assuming two years of research cruises. The Board has employed professional fund-raising consultants to develop a strategy to raise the significant funds required from the private sector. The SAG was asked to consider a number of questions in relation to the SALSEA programme, as follows:

(i) Is there support for the SALSEA programme?
(ii) Is there any other way of doing it?
(iii) Is the expenditure justified?
(iv) Is it technically feasible?
(v) Is it reasonable to expect that the programme will deliver the results needed?
(vi) Can the programme be considered alone or is assistance needed?

5.3 The Chairman noted that it would be difficult for the SAG to provide an objective review of the programme since almost all participants at the SAG meeting had been involved in the Workshop to develop the SALSEA programme. Nevertheless, it was recognised that important questions had been raised concerning the programme, and that the Group's views might be of assistance to the Board when it considers the programme and the proposed fund-raising strategy at its meeting.

5.4 With regard to support for SALSEA, the Group recognized that there has been a very significant increase in marine mortality of salmon since the 1970s and that returns to fresh water are now less than 50% of the levels in the 1970s and 1980s. The severity of the situation facing Atlantic salmon needs to be stressed to potential funders of the research. It was, however, recognized that if the increased mortality is related to climate change, there may be no opportunity to counteract it. This might make the programme less attractive to governments but the programme might still be attractive

to private funders as an opportunity to contribute to a better understanding of the salmon's life at sea.

5.5 The SAG recognized that SALSEA is a very comprehensive and ambitious programme which should ensure a thorough overview of the factors affecting mortality of salmon at sea originating in fresh water, estuaries, coastal or offshore waters. It was noted that there may be difficulties in securing the research vessel time detailed in the SALSEA programme given existing commitments and that consideration might need to be given to chartering of vessels.

5.6 The SAG noted that studies of the economic value associated with exploitation of salmon in a number of countries have confirmed the very significant value of the resource. For example, in Scotland a recent study has estimated that recreational salmon fishing generates in the region of £75 million annually to the economy. In addition, however, there are very significant existence values associated with the resource, which may greatly exceed those associated with its exploitation. The SAG felt that, given the enormous economic values of wild Atlantic salmon and the depleted state of most stocks, additional expenditure on research of around £8 million over a five-year period was justifiable.

5.7 The SAG discussed whether or not the SALSEA programme was technically feasible. Some concern was expressed about the capabilities of genetic stock identification techniques. These techniques are being used successfully in the Foyle system in Northern Ireland, and on the Moy in Ireland, to identify individual tributary stocks in the fisheries, and in Alaska for management of the Pacific salmon fishery. It was recognized that it would be far more challenging to employ these techniques to identify the origin of salmon caught at sea in the SALSEA research programme because the application of GSI is dependent on the existence of comprehensive baseline data for all contributing stocks. It was noted, however, that there have been major advances in genetic analytical techniques and that identification to the regional level (e.g. major stock complexes) should be feasible even if it is not initially possible to assign salmon to individual rivers. The SAG noted that there has been standardisation of the suite of genetic markers that will be used by salmon geneticists and that there are several initiatives underway to collect baseline genetic material, including the Atlantic Salmon ARC project detailed in the inventory. A major advantage of GSI techniques is that the origin of every fish caught at sea becomes known as compared to conventional tagging programmes where only the few recovered fish provide information as to their origin.

5.8 The SAG agreed that it would be important for the SALSEA programme to be reviewed externally. Dr Dick Beamish from the Canadian Department of Fisheries and Oceans in Nanaimo and Dr Jack Helle, who is presently Chairman, through the North Pacific Anadromous Fish Commission, of an international salmon research programme in the Bering Sea (BASIS) involving collaboration between all NPAFC Parties, were suggested as possible reviewers from the Pacific. Dr Niall O'Maoileidigh, Chairman of the ICES Diadromous Fish Committee, agreed to raise the issue of review of the SALSEA programme by ICES at that Committee's next meeting. It was suggested that the SALSEA programme might also be presented to other ICES Committees at the Organization's Annual Science Conference in Aberdeen in September 2005 so as to encourage support for the SALSEA programme from broader marine research disciplines.

5.9 The SAG noted that the EU's Seventh Framework Programme, which includes a marine component, might be a source of funding for the SALSEA programme. The SALSEA programme has been developed as a concept document and individual Tasks would need to be further developed into research proposals if funding was to be sought from this Seventh Framework Programme.

6. Other business

6.1 There was no other business. The Group thanked Mr Meerburg for his excellent work during his time as the SAG Chairman.

7. Report of the meeting

7.1 The SAG agreed a report of its meeting.

8. Date and place of next meeting

8.1 The SAG decided to agree the date and place of its next meeting by correspondence.

Annex 1 of SAG(05)4

List of Participants

Canada

Mr David Meerburg (Chairman)

Denmark (in respect of the Faroe Islands and Greenland)

Dr Jan Arge Jacobsen

European Union

Dr Malcolm Beveridge
Dr Niall O'Maoileidigh
Dr Ken Whelan

Norway

Dr Lars Petter Hansen

USA

Mr Tim Sheehan

Secretariat

Dr Peter Hutchinson

SAG(05)3

Meeting of the Scientific Advisory Group of the International Atlantic Salmon Research Board

Palais des Congrès, Vichy, France
14.00 hrs, Sunday, 5 June, 2005

Agenda

1. Opening of the meeting

2. Adoption of the agenda

3. Election of Chairman

4. Review of the updated inventory of research

5. The SALSEA Programme

   (a) Report of the Dublin meeting
   (b) Focused coordination of existing resources
   (c) Recommendations to the Board

6. Other business

7. Report of the meeting

8. Date and place of next meeting

Annex 4

BRAKELEY
FUNDRAISING & MANAGEMENT CONSULTANTS

The SALSEA Programme

Final Report of

a Feasibility and Planning Study

for

The International Atlantic Salmon Research Board (IASRB)

June 2005

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1. Executive Summary

1. Introduction

Early in 2005, BRAKELEY Ltd was commissioned by the North Atlantic Salmon Conservation Organisation (NASCO), on behalf of the International Atlantic Salmon Research Board (IASRB), to advise on the possibility of raising up to GBP 10 Million for a Research programme. BRAKELEY proposed to undertake a feasibility and planning Study consisting of

- an internal strategic review
- preparation of the Case for Support
- prospect research
- an external interview programme to test the Case for Support and the SALSEA objectives

This report sets out the findings from the study.

2. Background

NASCO is an inter-governmental Treaty Organisation established in 1984. Its Contracting Parties include every North Atlantic government with Atlantic salmon interests and 23 NGOs are accredited to it. Although, primarily through the activity of NASCO and its members, considerable steps have been made towards improving river and inshore habitats for salmon, resulting in stabilisation in the number of smolts leaving for the open sea, the numbers of fish returning from sea to complete the life cycle are falling drastically. While there are a number of possible explanations, the ocean life of salmon is not fully understood and an urgent research programme is required. The IASRB has been set up to respond to this problem and has devised SALSEA (Salmon-at-Sea), a five-year research programme with a total cost of the order of GBP 11 Million.

3. Methodology

Success in fundraising depends on five essential elements

- a convincing Case for Support
- urgent and essential financial Needs
- realistic Sources of Support for the financial goal
- strong Volunteer Leadership
- Organisational Readiness and capability for fundraising.

Evaluation of these five elements through research and a programme of interviews with potential donors forms the basis of this study.

In the internal review five interviews were undertaken and from these, and other material provided, a draft *Outline Case for Support* and a sample *List of Financial Needs* were prepared. Simultaneously, research on prospective donors was undertaken in Europe and North America from which a list of potential interviewees for the external interview programme was prepared. Difficulty was experienced with arranging and undertaking some of the interviews and in the end fourteen out of the twenty interviews were completed. This is significant for the outcome of the Study.

4. The Case for Support

A draft Outline Case for Support (Appendix B) was prepared in consultation with NASCO officers and discussed with interview respondents. The key premises of the Case are generally accepted. They are that

- the number of wild Atlantic salmon is declining
- the problem is critical
- river and inshore factors are no longer the main problem
- the main problem is ocean mortality
- a comprehensive research programme is required to understand the problem and provide a basis for action to counteract it
- new technologies becoming available now make such a programme possible.

A number of issues require resolution. They include focusing the profile for fundraising by concentrating on the SALSEA programme objective; clarifying the similarities and differences with Pacific Salmon programmes and activities; raising the profile of the ocean programme compared with specific and local activities; managing expectation in relation to the programme, and establishing confidence in the outcome of the research.

5. Financial Needs

A draft List of Financial Needs was prepared presenting the cost elements of the SALSEA programme restructured with donors in mind (Appendix C). The element likely to be of most interest to potential donors is the research in the open ocean with associated provision of equipment and novel technologies. The inshore elements are already in the programme and, in many cases, supported locally. At present the communications elements are not specific enough to be attractive. It

is very unlikely that the whole programme could be supported from private sources.

One of the strongest arguments for the SALSEA programme is that the size and comprehensiveness of the problem requires that it should be undertaken by an international organisation. It is essential that any existing or planned initiatives of a similar kind by other local, national, or continental organisations should be co-ordinated with the overall SALSEA programme. Otherwise the strength of funding approaches will be dissipated - for all parties.

6. Financial Goal

The financial goal tested in the Study was GBP 7.5M over a five-year period. The evidence suggests that a goal at this level is too high and that additional money from Contracting Parties will be required if the SALSEA programme is to be completed within the time period. Making this additional money available in the form of "matching" or "partnership" funding could be helpful in attracting private funding.

7. Sources of Support

A programme of prospect research was undertaken in Europe and in North America both to prepare for future fundraising and to identify people to be interviewed in the Study. The main requirements for interview were

- a connection to NASCO/IASRB
- a keen interest in the survival of the Atlantic Salmon
- possession of wealth, control of wealth or influence on wealth.

Fulfilling the first of these requirements proved difficult and it accounts for a number of the interviews being difficult or impossible to arrange. Interview discussions were therefore largely with corporate leaders or foundation officers. Use of a test Gift Chart for GBP 7.5 M (Appendix D) confirmed that gifts in the upper ranges would prove difficult and that the test goal was too high. At present it would appear that any financial support would be from foundations or companies rather than from individuals. Some organisations believed that they had already contributed, for example to inshore measures such as buying out net fishing.

8. Leadership

Strong volunteer leadership is essential for success in fundraising. Neither NASCO nor IASRB appears to have the right contacts for enlisting strong volunteer leaders. Accredited NGOs may be in a better position to introduce and attract such leadership for the SALSEA programme.

9. Organisational Readiness for Fundraising

The NASCO/IASRB Secretariat is very small and is not set up to undertake a major fundraising programme. Professional fundraising management, closely co-ordinated with the management of the SALSEA programme itself and with participating Accredited NGOs, would be required. There do not seem to be any organisational impediments in terms of attitudes to fundraising.

10. Public Relations

Not only does NASCO/IASRB have a very low profile but media reports connected to the decline in Atlantic Salmon numbers tend to concentrate on particular geographical areas or on specific issues such as salmon farming. The broader picture of the decline in salmon returning from the ocean and a need for the full understanding of the factors concerned is not being presented. This position is contrasted with the high profile for issues related to the Pacific Salmon. Although public relations activity does not usually raise money directly it contributes to creating a climate of opinion that assists fundraising approaches, particularly where issues are urgent. Action needs to be taken to raise the general profile of the SALSEA initiative.

11. Conclusions

The Case for Support for the SALSEA initiative is a strong one. There is a demonstrable need for a solution to an urgent problem; the comprehensive knowledge required to provide the solution has not yet been acquired; the technological means to acquire the knowledge is now available; acquiring it is expensive and requires international co-operation; the SALSEA approach offers the best means of acquiring this knowledge.

The Financial Needs setting out the SALSEA programme contain elements that would be attractive to private sources of funding, particularly the ocean research elements.

Potential Sources of Support, primarily foundation and corporate, exist. The Test Goal used in the Study - GBP 7.5M - appears to be too high for fundraising from private sources and additional support from Contracting Parties would be required to complete the programme within the five-year timescale. Such additional support would provide leverage for fundraising.

Lack of strong Volunteer Leadership is the biggest impediment to successful fundraising for the SALSEA programme. Enlistment of financially strong and influential persons to champion the cause will be essential for success. Accredited NGOs may be able to provide help in this area by providing access to candidates through their own volunteer leadership.

The necessary infrastructure for fundraising does not exist within the NASCO/IASRB secretariat. Either additional personnel would need to be appointed

or professional management bought in. Co-ordination with the management of the SALSEA programme and with NGOs would be essential.

A much higher profile for SALSEA and the problem of salmon death at sea will be needed.

12. Recommendations

On the basis that the SALSEA initiative as costed is adopted by NASCO/IASRB and supported by Accredited NGOs:

1. Contracting Parties should be approached for an additional GBP 4M over the five-year period, (this additional funding possibly contingent on matching funds being secured from private sources).
2. A fundraising initiative for GBP 4M over five years should be undertaken.
3. Accredited NGOs with fundraising experience should commit themselves to providing support for the fundraising for this initiative for the period of the programme.
4. The focus of fundraising should be the SALSEA initiative with IASRB as the managing agent for the programme.
5. All fundraising initiatives by Accredited NGOs for activities falling within the SALSEA programme should be encouraged as long as they are fully co-ordinated with programme management.
6. NASCO/IASRB should engage professional fundraising management.
7. Management of fundraising should be closely co-ordinated with the management of the SALSEA programme.
8. The President of NASCO should budget a substantial proportion of his time for fundraising/public relations activity.

13. Next Steps

The following are the next steps that should be taken:

1. A 'public private partnership' strategy should be defined and agreed by NASCO/IASRB.
2. With the assistance of the Accredited NGOs, IASRB should enlist (or create a parallel structure including) people who can deliver the GBP 8M (USD 14M) of additional public and private funding required.
3. The Accredited NGOs should be integrated into the strategy with full transparency and partnership in both policy and fundraising matters.
4. A communications programme should be implemented to support these initiatives.

14. Cost of Fundraising

NASCO/IASRB should expect the full cost of fundraising to be between 8% and 12% of the money raised.

2. Introduction

On 12 January 2005 a meeting took place between Dr Malcolm Windsor, Secretary of the North Atlantic Salmon Conservation Organization (NASCO) and the International Atlantic Salmon Research Board (IASRB), and Mr William Conner, Managing Director, Brakeley Ltd. The purpose was to discuss the possibility of NASCO/IASRB raising up to £10 million for a research programme.

(A note on the organizations – NASCO and IASRB – is provided in Appendix A)

In response, Brakeley submitted a proposal for a comprehensive Fundraising Feasibility Study to assess the IASRB's potential for fundraising and to advise on the best course of action. The menu of Study items proposed was:

Item I: Internal Strategic Review

Item 2: Writing a draft Case for Support

Item 3: Prospect Research

Item 4: External Feasibility Interviews to assess the Case and the financial needs.

The IASRB accepted the proposal in January 2005. David Morris, Senior Consultant was the Lead Consultant on the project, working with Josephine Warrior, Writer and Consultant, and Anne Conner, Consultant and Prospect Researcher. William Conner, Executive Vice President and Managing Director was the Supervising Director.

In Item I of the Study – the Internal Strategic Review – Brakeley carried out an abbreviated review of IASRB's existing situation. This focused on the Case for Support, the Financial Needs, and the associated costs and leadership strategies. Although two 'internal' interviews were initially proposed, it proved necessary to undertake five interviews with NASCO/IASRB staff that were carried out in January and February by Josephine Warrior. The names of those interviewed are set out in Appendix A. From these interviews and other documentation an Outline Case for Support was drafted and a sample List of Financial Needs prepared. In parallel, David Morris and Anne Conner undertook Prospect Research (Item 3) in Europe and North America. A report on the findings from those interviews and from the Internal Strategic Review - including a draft Case for Support, draft List of Financial Needs, and a list of prospective funding sources - was presented to Dr Malcolm Windsor in an interim report meeting on 9 March 2005.

The External Feasibility Study (Item 4) to assess the attractiveness of the Case and the Financial Needs was then undertaken by the consultants during April and May 2005. This was planned to consist of a further 20 confidential interviews with people considered to be prospective donors, potential leaders of fundraising, or persons who could give valuable advice.

We should like to express our appreciation to Margaret Nicholson, PA to Dr Windsor, for her efficient help with interview arrangements, documents, and correspondence with potential interviewees.

3. Background

The North Atlantic Salmon Conservation Organization (NASCO), an inter-governmental Treaty Organization, was established in 1984. Every North Atlantic government with Atlantic salmon interests is a member of NASCO and 23 non-governmental organizations are also involved. In response to concerns about stocks, NASCO has been able to persuade its Contracting Parties to undertake a broad range of remedial measures with considerable success.

These measures have been informed by the progress that has been made in recent years towards the increased understanding of the life cycle of salmon. Great strides have been made towards improving river and inshore habitats over the last two decades and the number of smolts leaving rivers for the open sea has been sustained or is increasing. However, the number of salmon spawning in the rivers is continuing to decline at an alarming rate. Huge numbers of salmon are failing to return from sea.

In response to the urgency of this problem, NASCO has established the International Atlantic Salmon Research Board (IASRB). IASRB is a charitable board consisting of representatives from the Contracting Parties of NASCO – Canada, Denmark (in respect of the Faroe Islands and Greenland), the EU, Iceland, Norway, the Russian Federation, the USA). The 23 NGOs affiliated to NASCO are also represented. The task of the IASRB is to direct and coordinate an International Atlantic Salmon Research Programme (SALSEA) to identify and explain the causes of increased marine mortality of Atlantic salmon, and to examine the possibility of taking action to counter these mortality rates and restore the wild salmon to its historical level of abundance.

Although the governments that sponsor NASCO and the IASRB provide annual funding of the order of GBP 4 Million (USD 7.25 M), the urgency of the problem is such that additional funding for specific research could be critical to the survival of the Atlantic salmon. NASCO and the IASRB therefore identified and wrote to a number of potential donors in an attempt to engage their interest and support. Many did not reply, and those that did reply regretfully declined to help.

It was against this background that NASCO and the IASRB approached Brakeley. Brakeley suggested a programme to explore the feasibility of fundraising, and also recommended that the study should focus directly on fundraising for the SALSEA research programme, as a clear and compelling objective, rather than for the parent bodies.

4. Methodology

The success of any major fundraising programme depends on the strength of five essential elements. These are:

- A convincing Case for Support
- Essential and realistically costed Financial Needs
- Accessible Sources of Support and an ambitious but realistic Goal
- Strong and inspiring Volunteer Leadership
- Organisational Readiness to begin and support a fundraising programme or campaign.

It is our experience that, in the absence of a positive evaluation for each of these five elements, achieving success in a major gift fundraising enterprise is likely to be difficult. Thus the conclusions and recommendations in this Report have been made with these five elements always in mind.

A Convincing Case for Support

The 'Case' of an organisation embraces the total picture of what the organization stands for – its mission, its traditions, its achievements past and recent, and, most importantly, its plans and aspirations for the future. A statement of the Case is the means of communicating to potential donors the importance of the SALSEA programme and a justification for requesting significant gifts. The Case must be coherent and inspiring, and it must present a 'vision' that people can share.

Essential and realistically costed Financial Needs

For fundraising to succeed the areas of need for which the IASRB is seeking funding must be thoroughly documented, realistically costed, and viewed by potential donors as urgent and essential to the realisation of the IASRB's vision - survival of the Atlantic salmon.

Accessible Sources of Support and an ambitious but realistic Goal

Sufficient numbers of validated potential donors must be identified - wealthy individuals, companies and foundations - who are prepared to consider supporting a challenging but achievable goal.

Strong and inspiring Volunteer Leadership

A committed, respected group of campaign committee members, led by a person of public standing who will inspire action and support, is essential in order to carry forward any ambitious fundraising programme. Members of such a campaign committee will need to lead fundraising by example and open doors to donors at the highest level if success is to be assured.

Organisational Readiness to begin and support a major fundraising initiative

The final factor in fundraising success is the readiness of IASRB (and NASCO) to engage in a fundraising campaign. This requires, in addition to clear and decisive leadership, an organisational commitment of time and resources necessary to ensure success

It is around these five elements that interviews are based and on which this report and its recommendations are structured.

As already described, the Internal Strategic Review, the preparation of the Case and List of Financial Needs, and the research on prospective donors proceeded, for the most part, smoothly and effectively. More detailed information is given in the following sections.

However, serious problems were encountered when potential external interview partners were approached and Brakeley consultants had much more difficulty than usual in obtaining external interviews. This is not altogether surprising considering that NASCO works mainly at a government, NGO, and research organization level. Brakeley frequently works across continents, has access to consultants and contacts in many countries, and has carried out many international feasibility studies but considers that the problems in obtaining external interviews was particularly marked in this case. Ease of access to such external interview partners is frequently, but not always, an early indication of how swiftly an organization might be able to embark on a fundraising initiative. The difficulty encountered in this instance suggests that some radical consideration will need to be given as to how the IASRB can begin to access the wealthy and influential people who might be persuaded to support the SALSEA programme.

5. The Case for Support

The first requirement for success in fundraising is a strong, compelling and visionary 'Case for Support'. The preparation of a succinct outline of the arguments for supporting the SALSEA programme is an important tool in the study. During the Internal Strategic Review we therefore explored the strengths and the weaknesses of the SALSEA programme and prepared a brief draft of an Outline Case for discussion with the external interview partners. This was reviewed and discussed with NASCO officers and the final version is included as Appendix B.

The key features of the Outline Case are:

- the nature and attractiveness of wild salmon
- its economic and environmental importance
- NASCO/IASRB's previous successes in conservation
- the current problem and the increasingly urgent need to solve it
- the significance and timeliness of the SALSEA programme.

The nature and attractiveness of wild salmon

The case describes the beauty and fascination of this 'King of Fish', the mystery of its life cycle, and the enjoyment people get from seeing it in the wild.

Economic and environmental importance

The case highlights the economic importance of the wild salmon in terms of its value in sectors such as tourism and fishing, and its environmental significance as an 'aquatic canary'.

Conservation successes

Previous successful national and international environmental and economic initiatives, many initiated by NASCO, are outlined. These include the cleansing of polluted rivers, the use of 'catch and release' in recreational fishing, and the buying out of commercial fishing.

The current problem

The case spells out how, despite all this, the numbers of salmon returning to spawn in their hatch rivers are continuing to plummet, and the desperately urgent need to find out why this is happening before it is too late.

The SALSEA programme

The SALSEA programme is then introduced, explaining the need for further accurate knowledge to discover the reasons for this alarming decline in the number of returning wild salmon and so to promote measures to improve its survival. The timing is right, the technology is now available, and researchers are in place. What is lacking is the funding.

Issues arising from the Case

Several issues arose from the discussion of the case.

Confusion over the organisations concerned

There was confusion about the organisations involved even among those who had some familiarity with the sector. This not only included the relationship between NASCO and the IASRB, but also between these and other organisations working on marine and environmental issues, and the institutions, such as universities, carrying out related research. Clarity and simplicity will be critical in all presentations and approaches. 'SALSEA' should therefore be the objective of any fundraising initiative with IASRB as the organisation doing the fundraising. NASCO should remain in the background.

Comparison with Pacific Salmon research

Particularly in the case of North American respondents, attention was drawn to the number of programmes and the amount of work that had been carried out in studying the Pacific salmon as compared to the Atlantic salmon. Whereas the Pacific Salmon activity had a strong profile and was high in the public (certainly the media) consciousness, the Atlantic Salmon had not so much a 'bad press' as no press at all. The coverage that appeared, on either side of the Atlantic, tended to be about local issues or was related to the debate on the impact of farmed salmon, often connected to a particular environmental perspective. The coordinated and comprehensive work of NASCO has a low profile and is not seen in the context of the wider picture.

Awareness

For some respondents another feature of the comparison with the Pacific Salmon picture was an implication that much of the proposed work had already been done in the Pacific and that a major programme of research on the Atlantic Salmon would be 're-inventing the wheel'.

For example, one person drew attention to

"The ***definitive*** study on death of Pacific salmon [that] has been done by Dr. John Volpe at the University of Victoria. Sea lice around the anal pores of the salmon are what is killing them. The explosion of the sea lice population is especially devastating for baby salmon which pass so near the net pens that they are infested with the sea lice as they swim by."

A check with NASCO indicated that, while this conclusion was important, other research had shown that it was neither a sufficient nor a necessary explanation of salmon death at sea, but it illustrated the perceptions prevalent among potential donors. Only in the wider context can such factors be judged as definitive or contributory and the broad picture needs to be emphasised when approaching possible donors. For example, the differences between the Pacific and Atlantic Salmon and the reasons for much more money being put into conserving Pacific salmon stocks need to be explained and put into context and the opportunities for collaboration require exploration.

Research

It is important that, while the critical nature of the situation is emphasised, the possibilities for future action are also presented and that no justification is provided for the view that

'people have written off the Atlantic Salmon and see funding of Pacific Salmon-related research and initiatives as a better investment."

An issue that needs to be discussed and prepared follows from questions raised about the level of confidence in the outcome from the research. For example there is concern either that no significant answers will result from the SALSEA programme, or that it is an expensive way of confirming an answer that is already known (such as global warming) but that little can be done about it.

These are valid concerns, but they can be answered by pointing out that uncertainty of outcome is a central characteristic of essential research; that even negative answers will suggest alternative ways forward and the best areas or strategies on which to concentrate future resources; and that data gained can be used to support action in other areas, for example, pressure for initiatives to reduce global warming if this proves to be a prime cause of the Atlantic Salmon's decline in numbers.

There is also a conflict of attitude between those who want to get something done immediately and scientists who consider that without fuller understanding any action will address the symptoms and not the underlying condition. Among some prospective donors there was considerable respect for the 'dollar to save a salmon' approach of Orri Vigfusson and the Atlantic Salmon Fund in that it showed results straight away. There was a perception that, in the words of one respondent,

'Scientists are inclined to say 'wouldn't it be awfully interesting to know' while the fish are dying'.

Comment

Once presented, the basic premises of the Case for Support

- The number of wild Atlantic Salmon is declining
- The problem is urgent
- Most, if not all, of the river and inshore factors have been identified and action has been or is being taken
- The problem lies in the ocean phase of the life cycle (or in interaction with the ocean phase)
- A comprehensive approach needs to be taken to understand this phase as a basis for taking action
- New technologies make the research possible

appear to be generally accepted and an initiative to do something about it is generally welcomed. It is then necessary to show that the comprehensive approach presented is the optimum one in scientific, economic and practical terms.

'The key message is 'we don't know' but you must show where all this is leading'.

6. Financial Needs

A second essential requirement for successful fundraising is that potential donors perceive the objectives for which money is sought as urgent and compelling and essential to achieve a shared aim. After the discussions arising from the internal interviews, we prepared a List of Funding Needs, attached as Appendix C. The preparation of this document required some restructuring of the way in which the SALSEA programme was described. In particular, it was necessary to look at the cost elements of the five-year programme from the point of view of people who might fund it.

The document refers to two main elements - an inshore programme and an offshore programme.

The inshore programme – studies in estuaries and inshore areas – is presented as the continuation of existing activity, providing quantification of the qualitative factors already known, with an extension of this work to the factors affecting the transition from fresh to salt water. The funding for this element is seen as being an extension of existing governmental and agency provision.

The offshore programme – research in the open ocean – is the main focus of fundraising for SALSEA and is presented as essential to completing the 'big picture'. This offshore programme is further divided into a number of elements:

- modelling, designing and planning a project to investigate the distribution and migration of salmon at sea
- a programme of research cruises to execute the project
- further development and application of novel technologies to use in the project.

The need for a comprehensive communication and education programme to convey the vision, ongoing progress and findings of SALSEA to the world, particularly to the people and powers that can take appropriate and relevant action to change what can be changed, is then emphasised.

Responses to the Needs

As indicated in the previous section, the argument that the answer to why the wild Atlantic salmon numbers are declining lies in the deep sea seems to be generally accepted. However, the reaction to these needs raised several issues.

- The preparation stage is recognised as critical to the success of the research voyages, but it is not viewed as 'sexy' and may therefore be difficult to raise money for
- The research voyages ("whatever you do DON'T call them 'cruises'"!) and novel technologies are seen as interesting and likely to appear attractive to a variety of donors.
- The communications programme, is seen as necessary but neither the elements nor the costs are clear. More work is needed to specify the requirements in this area if funding assistance is to be sought.

Other Programmes

Initially, our understanding was that the SALSEA programme for the study of Atlantic Salmon in the ocean phase was unique since the costs involved were high and the need for international coordination and an overview meant that it was out of the range of individual countries, institutions or NGOs. However, in our research on related organisations and activities we became aware of a smolt 'ocean tracking' research programme sponsored by the Atlantic Salmon Federation (ASF), an NGO based on the North American Atlantic seaboard. Subsequently, we have become aware of some recent tensions between ASF and NASCO that appear to be in the process of being resolved.

It is essential that an ambitious programme like SALSEA, if it is to succeed in attracting funding at the necessary level, is 'the only game in town' and that all related activities, especially if they are likely to be approaching the same potential funding sources, are fully coordinated within it. It will be to no one's advantage if potential donors find themselves approached by competing organisations for support for similar purposes.

The corollary is that the role of all potential participants, particularly if they themselves are successful at fundraising for their activities, needs to be recognised. There also needs to be an appropriate mechanism for their participation in the development of the overall programme and acknowledgement of the contribution that can be made by their expertise.

Comment

As is discussed in a later section we do not consider that it is possible to fund the whole programme from private sources. In packaging the elements of the Salmon at Sea programme it will be essential to look at cost elements - such as specific voyages, equipment and techniques - and present them within the context of a broad governmentally-funded programme leading towards a defined objective.

7. Financial Goal

The sum total of the costed elements in the list of needs was of the order of GBP 11M (USD 19.5M). Recognising that NASCO's sponsoring organisations provided research support of the order of GBP 4M (USD 7M) per annum, a test goal of GBP 7.5M (USD 13.2M) over five years (GBP 1.5M (USD 2.6M) per year) was suggested.

Reactions to the level of the goal were mixed. There was general acceptance of the proposition that research carried out in the deep ocean was likely to be expensive, that the programme was urgent and did not look extravagant, and that five years was the optimum timescale in view of the lifecycle of the salmon.

The total was, however, considered to be a high one, even spread over a number of years. There was also the additional complication that partial funding from sponsoring governments already existed. Although many examples of partnership funding between public (government) and private sources can be found on both sides of the Atlantic it is an area that has to be handled with some care.

On the governmental side can be found the view that

'government is already funding this and if they (supporters of the project) want it that badly they can pay the extra cost to bring it forward'.

From the donors' point of view, the key question that has to be satisfactorily answered is one that private (individual and corporate) donors invariably ask about government-funded agencies and institutions

'I already pay taxes: why should I pay again?'

The response to this question needs to focus on the extreme urgency of the problem and the questioner's commitment to its solution – in other words, the argument that a certain amount of funding from governments is forthcoming but that this is generally limited to basic support, already budgeted for, and renewed on an annual basis. The argument depends on the perception that such is the importance and urgency of the problem that additional funds must be obtained so that the research can be started at once and completed in the minimum timescale.

The possibility of additional government funding can be an attractor for private funding. Conversely, the potential existence of private support may be persuasive

in unlocking further government funding. One approach is to estimate the potential for attracting private funding for the objective and then approach government to provide the shortfall as 'matching' funding. This has the added advantage of providing an 'added value' incentive to prospective donors.

A difficulty that can arise in partnership between, on the one hand, governmental, particularly inter-governmental, organisations and, on the other, voluntary not-for-profit organisations results from differences in culture. The former are thorough, consensual and perceived by the latter as bureaucratic. The latter are driven by enthusiasm, 'can-do' in approach, and perceived by the former as sometimes blinkered and irresponsible particularly in their public relations activities. Each partner needs awareness of the strengths and weaknesses of both if a productive collaboration is to result.

Comment

In general those consulted considered that the test goal was too high to be met solely from non-governmental sources. We are therefore of the view that further funding from the Contracting Parties will be essential if the Salmon-at-Sea programme is to be completed within the proposed timescale.

8. Sources of Support

For a fundraising programme to be successful it is, of course, essential that there are adequate prospective donors prepared to give at the levels necessary to achieve the goal. An essential part of the study has therefore been to undertake research to build up a list of prospective donors to prepare the ground for possible future fundraising.

In our discussions we not only look at respondents' perceptions of what a realistic overall goal might be (as described in the previous section). We also seek their views on the numbers and levels of potential gifts that might make up such a goal.

As an aid to this discussion we prepare a Gift Chart (Appendix D) demonstrating how the donation profile for such a goal might be constructed. (An alternative Gift Chart in US Dollars was also prepared). The rationale for this process stems from the well-established phenomenon, validated over many fundraising campaigns, that in a typical successful campaign some 10% of the total comes from one gift, 40%-50% from the first ten or so gifts, 80%-90% from around one hundred gifts with the balance coming from many smaller gifts. Because the bulk of the total is provided by a small number of large gifts, their identification and evaluation provides significant evidence for deciding on fundraising potential. While no two campaigns are ever identical this pattern provides a good starting point for analysis and planning.

The initial prospect research was aimed at identifying people who could be interviewed in the second stage of the study. We were looking for people with the following characteristics:

- a connection to NASCO/IASRB
- a keen interest in the survival of the Atlantic salmon
- possession of wealth, control of wealth or influence on wealth.

Fulfilling the first of these requirements proved the most difficult. The external list contains mainly foundations, together with some companies considered to have an interest in the future of the wild salmon, and a few well-known 'salmon-enthusiasts'. We were aware that NASCO had already tried writing to some high-profile individuals already - without success. We were not altogether surprised when interviews with others proved difficult or impossible to arrange.

There is already a considerable amount of money, commensurate with the levels needed to fund the SALSEA programme, going into wild salmon conservation on both sides of the Atlantic. Most of this is supporting local initiatives, some of it in fulfilment of the 1994 Oslo Agreement of NASCO countries.

In order to tap into these sources it will be necessary for IASRB to convince both recipients and donors that unless the SALSEA programme is undertaken, the broad picture understood, and measures taken to counteract the death of salmon in the ocean, their local action will prove useless in the longer term in preventing the continuing decline of the wild salmon population.

It will also need to be borne in mind that many of the companies and organisations with an interest in salmon fishing have already been 'tapped on the shoulder' (as one respondent put it) in order to undertake such initiatives as the buying out of net fishing in estuaries.

Comment

We consider that there are potential sources of financial support that would justify a programme of fundraising from non-governmental sources for the SALSEA initiative. The evidence that we have at present suggests that this would have to be led by approaches to foundations since we are not at present convinced that IASRB has the personal contacts and relationships that would enable the Board to raise significant money from wealthy individuals or from companies.

9. Leadership

Influential contacts and relationships are essential to any major fundraising programme. Unless volunteer leaders of substance are prepared to show their commitment to the cause - by giving up their time, opening their address books, and contributing financially either in a personal capacity or through an organisation over which they have influence - it is not possible to access gifts at the levels essential for successful achievement of a high goal.

The difficulty of identifying potential leaders for interview and the problem of arranging interviews with those identified has already been mentioned. It is clear that neither NASCO nor IASRB has any significant direct contacts or influence with people who could bring private money to support a major fundraising initiative for the SALSEA programme.

In view of the importance of volunteer leadership for fundraising this finding would normally lead us to advise against any serious fundraising initiative. However, it became clear during the study that some of the NGOs accredited to NASCO were already successful in fundraising and mobilizing volunteer leaders of the social and economic calibre required to attract significant gifts to their cause. If the access and contacts that the NGOs possess could be made available to fundraising for the SALSEA initiative then the possibility would be opened for substantial fundraising success. But there are undoubted difficulties.

In Sections 5, 6 and 7 above we have already noted problems in the relationship between NASCO and some of the NGOs. At the time of writing this report it appears that there is a will on both sides to resolve these issues both to ensure the involvement of all relevant NGOs and to improve the cooperation between the governmental and non-governmental partners in pursuing the objective that all share. This is encouraging since a good relationship is essential if private money is to be sought.

However, even if the relationship between the inter-governmental organisation and its accredited NGOs were a smooth one, access to the latter's volunteer leadership would be a sensitive issue. NGO's have their own objectives, mainly local ones, for which they have raised money and for which they are supported by their friends. They have also invested time, effort and money into the research and cultivation needed to attract busy and successful people to take on a leadership role in their fundraising. Sharing this with others, even for a wider cause in which they all believe, will not be easy.

Comment

High calibre volunteer leadership will be essential if private money to support the SALSEA programme is to be forthcoming. Within the timescale required this will only be possible with the active involvement of the Accredited NGOs. Discussion should therefore take place with the most active of these NGOs with a view to exploring how they would be able to assist with fundraising for the SALSEA programme. In undertaking these discussions it will be essential to emphasize that the objective is not to divert existing or potential funding from the NGOs to SALSEA (unless that is also the NGOs' objective), nor is it to 'poach' NGOs' leadership. Rather it is to recognise that the SALSEA programme is something bigger than any individual NGO can manage and therefore requires 'bigger' leadership on an international rather than national stage. The role of the NGOs would be to provide contact and introduction to that 'bigger' leadership.

10. Organisational Readiness for Fundraising

Without the resources and the ability to refine and present the Case and the Needs and to manage the relations with volunteer leadership and prospective donors fundraising will not be successful. We therefore look at the infrastructure of an organisation to assess its fundraising capability, the additional resources that might be needed, and whether there are any potential difficulties in terms of negative attitudes to fundraising that may need resolution.

We did not find in NASCO/IASRB any organisational impediments in terms of attitudes to fundraising and the people to whom we spoke were positive and enthusiastic. We also found the leadership of the SALSEA programme to be inspirational.

In terms of organisation, however, the NASCO/IASRB Secretariat is very small and, while we have found its members quick to learn the requirements of fundraising, it is not set up to undertake a major fundraising programme, particularly one distributed over a number of countries. For a programme of this kind, which requires close coordination with the management of the SALSEA programme and for which close co-operation with the participating Accredited NGOs will be crucial, experienced professional fundraising management will be essential.

11. Public Relations

Although public relations activity does not usually raise money directly it contributes to creating a climate of opinion that assists fundraising approaches, particularly where issues are urgent.

NASCO and IASRB appear to have a very low profile. This itself is not necessarily a problem since, as we have indicated above, there is a danger that the number of various organisations and acronyms can be confusing. However, the SALSEA message that the underlying problem lies with the death of salmon in the ocean is not yet coming through. Media reports connected to the decline in Atlantic Salmon numbers appear to concentrate on particular geographical areas or on specific issues such as the impact of salmon farming. The broader picture of the decline in salmon returning from the ocean and the need for a full understanding of the factors concerned is not being presented.

This position is contrasted with the high profile for issues related to the Pacific Salmon. Action needs to be taken to raise media awareness of the critical problem facing the Atlantic salmon, the location of that problem in the ocean, and the opportunity to understand and possibly solve it through the SALSEA initiative.

Comment

As the primary communicator of the SALSEA project, the incoming President of NASCO will need to budget a significant proportion of his time for media communication.

The assistance of Accredited NGOs would also be helpful in this area.

12. Conclusions

In Section 3 we set out the five essential elements for success in fundraising:

A convincing Case for Support

Essential and realistically costed Financial Needs

Accessible Sources of Support and an ambitious but realistic Goal

Strong and inspiring Volunteer Leadership

Internal Readiness to begin and support a Fundraising Programme or Campaign

The **Case for Support** for the SALSEA initiative is a strong one - emotionally, economically and rationally. There is a demonstrable need for a solution to an urgent problem and perception of the urgency of the problem is widely shared. There is widespread recognition that the comprehensive knowledge required to provide the solution has not yet been acquired but that the technological means to acquire the knowledge is now available. It is also understood that acquiring this knowledge will be expensive and will require international co-operation. The SALSEA approach is recognised as offering the best means of acquiring this knowledge.

The Financial **Needs** setting out the SALSEA programme contain elements that would be attractive to private sources of funding. These are primarily the ocean research elements including technologies and equipment. The communications and educational elements would need to be specified in much more detail before support was likely to be forthcoming.

Potential **Sources of Support**, primarily foundation and corporate, exist. The Test Goal used in the Study - GBP 7.5M - appears to be too high for fundraising from private sources and additional support from Contracting Parties would be required to complete the programme within the five-year timescale. Such additional support would provide leverage for fundraising.

Lack of strong Volunteer **Leadership** is the biggest impediment to successful fundraising for the SALSEA programme. Enlistment of financially strong and influential persons to champion the cause will be essential for success. NASCO/IASRB does not have the direct contacts to undertake this enlistment. Accredited NGOs, however, particularly those that undertake successful fundraising, have developed such contacts and could help significantly by providing access to candidates through their own volunteer leadership. Some

difficulties in the relationship with the NGOs would need to be resolved for this to happen.

The necessary **infrastructure** for fundraising does not exist within the NASCO/IASRB secretariat. Either additional personnel would need to be appointed or professional management bought in. Co-ordination with the management of the SALSEA programme and with NGOs would be essential.

A much higher profile for SALSEA and the problem of salmon death at sea will be needed.

13. Recommendations/Next Steps

Recommendations

On the basis that the SALSEA initiative as costed is adopted by NASCO/IASRB and supported by Accredited NGOs:

1. Contracting Parties should be approached for an additional GBP 4M (USD 7M) over the five-year period, (this additional funding possibly contingent on matching funds being secured from private sources).
2. A fundraising initiative for GBP 4M (USD 7M) over five years should be undertaken.
3. Accredited NGOs with fundraising experience should commit themselves to providing support for the fundraising for this initiative for the period of the programme.
4. The focus of fundraising should be the SALSEA initiative with IASRB as the managing agent for the programme.
5. All fundraising initiatives by Accredited NGOs for activities falling within the SALSEA programme should be encouraged as long as they are fully co-ordinated with programme management.
6. NASCO/IASRB should engage professional fundraising management.
7. Management of fundraising should be closely co-ordinated with the management of the SALSEA programme.
8. The President of NASCO should budget a substantial proportion of his time for fundraising/public relations activity.

Next Steps

The following are the next steps that should be taken:

A 'public private partnership' strategy should be defined and agreed by NASCO/IASRB.

With the assistance of the Accredited NGOs, IASRB should enlist (or create a parallel structure including) people who can deliver the GBP 8M (USD 14M) of additional public and private funding required.

The Accredited NGOs should be integrated into the strategy with full transparency and partnership in both policy and fundraising matters.

A communications programme should be implemented to support these initiatives.

14. Cost of Fundraising

It is Brakeley's general experience that the total cost of fundraising for a well-managed, focused campaign is likely to be between 8% and 12% of the overall financial goal.

APPENDICES

Appendix A – Note on the Organizations

NASCO

The North Atlantic Salmon Conservation Organization (NASCO), an inter-governmental Treaty Organization, was established in 1984. Every North Atlantic government with Atlantic salmon interests is a member of NASCO and 23 non-governmental organizations are also involved. In response to concerns about stocks, NASCO and its Contracting Parties have successfully:

prohibited salmon fishing on the high seas
initiated measures to minimize unreported catches
greatly reduced harvests in salmon fisheries
halted fishing for salmon in international waters by non-contracting parties
improved the salmon's environment in freshwater through habitat restoration programmes
introduced measures designed to prevent adverse impacts of aquaculture on wild stocks and to maintain the essential gene pool that will be necessary for healthy future salmon farming stocks
promoted good management practices, including precautionary management
instituted co-operative projects between salmonid aquaculture and wild fisheries, identifying areas of present and potential future cooperation
developed guidance for rebuilding salmon stocks.

IASRB

The International Atlantic Salmon Research Board is a charitable board consisting of representatives from the Contracting Parties of NASCO – Canada, Denmark (in respect of the Faroe Islands and Greenland), the EU, Iceland, Norway, the Russian Federation, the USA). The 23 NGOs affiliated to NASCO are also represented.

Chairman of the Board: Mr Jacque Robichaud (Canada)
Chairman of the Scientific Advisory Group: Mr David Meerburg
Secretary to the Board: Dr Malcolm Windsor

The task of the IASRB is to establish and administer an International Atlantic Salmon Research Programme into the causes of marine mortality of Atlantic salmon and the opportunities to counteract this mortality. Its Terms of Reference are:
To maintain an inventory of relevant research projects which are ongoing or planned and for which budgets have been confirmed
To identify research needs
To evaluate the inventory against research needs
To identify gaps in the inventory of research and set priorities for further research
To provide a forum for coordination of relevant research efforts by the Contracting Parties of NASCO
To develop administrative mechanisms to accept financial contributions to an International Atlantic Salmon Research Fund
To solicit and accept financial contributions and manage the Fund
To establish terms and conditions for soliciting, evaluating, approving and funding relevant research projects
To fund approved projects and review results in relation to the objectives of the Programme.

The IASRB has established a Scientific Advisory Group to identify research priorities, enhance coordination and advise on research proposals.

NASCO/IASRB Personnel – Interview List

Name	Position	Notes
Hutchinson, Dr Peter	Assistant Secretary, NASCO and the IASRB	
Potter, Ted	Head of Fisheries Biology, Centre for Environment, Fisheries and Aquaculture Science (CEFAS)	
Robichaud, Jacque	Chairman of the IASRB	By telephone
Whelan, Dr Ken	President of NASCO, and Director, Aquaculture & Catchment Management Services, Marine Institute, *Foras na Mara*, Ireland	
Windsor, Dr Malcolm	Secretary, NASCO and the IASRB	

Appendix B Outline Case for Support

SALMON AT SEA - THE CASE FOR SUPPORT

'The Salmon at Sea ('SALSEA') programme is an urgent investigation into one of the great mysteries of the oceans – the epic journey of wild Atlantic salmon from their home rivers in Europe and North America, through the waters of the North Atlantic to the feeding grounds in sub-Arctic regions, and then back again to spawn. It is urgent because the salmon are failing to return and we need to know why.'

North Atlantic Salmon Conservation Organization(NASCO)
Organisation pour la Conservation du Saumon de l'Atlantique Nord

An SOS

The exuberant silver leap of a salmon as it swims upstream to its place of birth evokes a responsive leap in the hearts of all who are fortunate enough to see it.

With the successful programmes now put in place by NASCO (the North Atlantic Salmon Conservation Organization) and its Parties, many more people ought to have the opportunity to experience this thrilling sight. The life of the salmon in rivers and coastal waters is now well-understood and local and national action and international cooperation have removed many of the threats to its wellbeing. Wild salmon fishing at sea is strictly controlled, polluted rivers have been cleansed (there are now salmon in the Rhine), and the use of 'catch and release' is widely followed in recreational fishing.

Yet in spite of these measures in some rivers wild Atlantic salmon are heading towards the brink of extinction. Although the numbers of migrating young fish (smolts) are high, the adult salmon are not returning. They are dying in the oceans once they leave the security of their natal rivers. The last two decades have seen an unprecedented decline to critical levels in the numbers of mature salmon returning to their home rivers to spawn. The cause of this decline is increased mortality at sea, which, for some stocks, is now twice the level of the 1970s.

Despite advances in our knowledge and many sacrifices made, throughout the North Atlantic countries, aimed at conserving and restoring stocks, the numbers continue to plummet.

We don't know why the salmon are being lost at sea.

Migrating salmon are under pressure – but are these pressures man-made or environmental? Are they connected with global warming? Are salmon dying as a by-catch in the fisheries for mackerel and herring that have developed in the North-East Atlantic? Are escaped farmed salmon changing the genetic structure? Do subtle pollutants in fresh water adversely affect the salmon as they make the transition to salt water? Has the food chain in the sea been disrupted? Are marine predators the culprits?

'The Atlantic salmon's story is a mystery. Why is this magnificent species dying at sea? We need to discover what is happening, so that we can provide a sound basis for management, and address those factors under our control, and provide extra support for stocks where necessary. We have the expertise and the experience to solve this problem.'

Dr Malcolm Windsor, Secretary, NASCO and the IASRB

The SALSEA Initiative

To explore these and other questions, the IASRB (the International Atlantic Salmon Research Board) is launching the SALSEA initiative. SALSEA draws together the best marine research expertise across

the North Atlantic in a research programme designed to unravel the mystery of the salmon's oceanic life and its migrations, and to identify, explain and promote measures to improve the survival of salmon at sea. The objective of SALSEA is to restore this remarkable species to its former abundance and to preserve the wild salmon for the enjoyment and benefit of future generations.

SALSEA is a comprehensive package of initiatives. The marine migration patterns of salmon are poorly understood. Knowledge is the key to rational management. SALSEA offers a unique opportunity to find out how salmon use the oceans: where they go, how they exploit currents and food resources, what critical factors affect migration and distribution, and what factors determine salmon survival at sea. The ultimate goal is to halt and reverse the decline.

The timing is right for the SALSEA initiative. Recent advances in technology, such as the development of live-capture trawls that enable young salmon at sea to be caught without damage, genetic stock identification techniques, and miniature electronic tags capable of recording environmental and positional information, promise an excellent chance of success.

'These new technologies combined with research surveys over vast areas and at different times of the year would give us an unprecedented insight into the distribution and migration patterns of salmon in the North Atlantic.'

Dr Peter Hutchinson, Assistant Secretary, NASCO and the IASRB

Support for SALSEA

The wild salmon, the 'King of Fish', brings pleasure and economic benefits to millions of people around the North Atlantic seaboard. A symbol of wildness and energy and an animal of shining beauty, the salmon is also an 'aquatic canary' alerting us to pollution problems in the rivers and streams it inhabits, a gene bank for the fish farming industry, and the ultimate test of skill for the angler. It generates great benefits for tourism in often-remote rural economies throughout North America and Europe. It will be a tragedy for salmon, for conservation, and for our regional economies if this decline is not reversed. There is little time left. Sponsoring government support is secure but the urgency of the problem means that additional funding for the SALSEA programme is required before it is too late. We are therefore starting a major international fundraising initiative to support this vital multi-disciplinary project. Answers are needed now.

'We have the knowledge, the will, access to all the lead scientists and an effectively working international framework. If we do not get the necessary funding soon, all our previous work will be for naught. With your help, we can do it. You can help the salmon to return.'

M. Jacque Robichaud, Chairman of the IASRB

Appendix C List of Financial Needs

SALSEA - THE NEEDS

Introduction
The International Atlantic Salmon Research Board's SALSEA project is the only comprehensive multi-disciplinary programme of research into the mortality of salmon at sea. It encompasses all the key areas where additional scientific knowledge is required to identify the causes of the failure of wild salmon to return.

There are two main elements to the programme – one inshore and one offshore.

The inshore element - studies in estuaries and inshore areas - should make it possible to identify areas where losses occur, and to quantify them and identify the causes. Factors affecting marine survival in the inshore zone can be quantified and should provide results within a timeframe of one to three years. Because the work falls within territorial waters, funding is largely the responsibility of governments and national agencies. The SALSEA initiative has shown a need in this area for greater coordination of existing programmes, the formulation of transboundary programmes, and a more focused use of resources around the SALSEA priorities.

The offshore element – research in the open ocean – is essential to complete the 'big picture'. By its very nature this work will initially have to be qualitative. However, open ocean mortality is the major factor driving the decline in key Atlantic salmon stocks, and therefore models that predict both the migration patterns and distribution of Atlantic salmon in the open ocean must be developed as a matter of urgency. A genetic study and the development of a database library, achieved through sophisticated sampling techniques and the enhanced application of technology on a broad scale, will enable researchers to gain the information that they need in order to advise on action to take.

This programme has a five-year timeframe – one year of preparation, three years of comprehensive sampling, and one year of analysis and planning for action. It is this area that needs the urgent additional financial support.

The Programme

1. The Ocean – Investigating the Distribution and Migration of Salmon at Sea

This wide-ranging, multi-disciplinary survey throughout the salmon's whole North Atlantic range, is an increasingly urgent priority. Researchers will collect data fundamental to determining the migration and distribution patterns of Atlantic salmon at sea.

Research Tasks
Developing theoretical migration models from existing data to design well-targeted marine surveys and test the theories.

Refining plans for a large-scale marine survey programme and the standardization of trawl survey techniques between the participating partners.

Conducting a comprehensive North-Atlantic-wide survey to collect the samples and the information required to compare migrations patterns, distribution, and possible factors affecting the survival of reared and wild salmon at sea – this element of the programme will require two years of research cruises.

Collating, analysing and reporting and publicising the data from the marine surveys and the consequent recommendations.

Funding Needs

Modelling, Design and Planning of Project	**£**
Staff costs	60,000
Expenses and transport	20,000
Total	**80,000**

Research Cruises
(Provisional outline programme of research cruise requirements (annually over three years - 2007 (April-November), 2008 (May-October) and 2009) with annual costs some of which will be incurred in 2006. All major tagging studies will coincide with these sampling periods.)

Cruise Origin	**No. of Cruises**	**Days**	**From**	**To**	**Estimated Cost £**
West					
Canada	4	20	Gulf of St Lawrence	Labrador Sea	1.050,000
United States	2	20	Gulf of Maine	Northern Nova Scotia	460,000
North American Total	**6**	**120**			**1,510,000**
East					
Eng/Wales	1	14	SW Irish Sea	Northwest England	120,000
Ireland/NI	1	14	NW Irish Sea	Western Norwegian Sea	120,000
Scotland	1	14	S E Scotland	Western Norwegian Sea	250,000
Norway	1	14	Southwest Norway	Mid-Western Norwegian Sea	200,000
	1	14	Greenland Sea	Western Barents Sea	120,000
Russian Federation	1	14	White Sea	Eastern Barents Sea	120,000
Iceland	1	14	South	South West Iceland	120,000
	1	14	North	North East Iceland	120,000
Faroes	1	14	Faroes	North Faroes	120,000
European Total	**9**	**126**			**1,290,000**
Annual Total	**15**	**246**			**2,800,000**
Three Year Total	**45**	**738**			**8,400,000**

(Note: Estimated costs are at national rates and could vary considerably depending on origin of research vessel (agency-owned versus contracted commercial vessel) and other factors.)

Equipment – Development and Application of Novel Technologies
In recent years there has been a systematic effort to sample young salmon at sea, but there are still major gaps in our knowledge of the oceanic phase. The development of new survey techniques has the potential to greatly improve our understanding. Advances in sampling methods, genetic methods of stock identification and fish scale analysis, and the establishment of genetic libraries, offer an opportunity to unlock the ocean's 'black box' and shed new light on the causes of Atlantic salmon decline. Work is still required to perfect these techniques.

Research tasks

Development of genetic tagging to determine stock origin.

Evolving sampling equipment to increase the sampling efficiency for salmon at sea.

Signals from scales: establish fish scale analysis techniques to identify marine growth histories and anomalies indicating common mortality factors.

Funding Needs	**£**
Genetic tagging programme – development and analysis	1,500,000
Development and implementation of sampling equipment	330,000
Development of techniques of fish scale analysis	100,000
Total	**1,930,000**

2. Inshore - Death in the Early Migration Phase
Increasing evidence demonstrates that the freshwater and marine environments cannot be considered in isolation. We need to know what factors – including fresh water and man-made factors operating in the coastal zone – affect the survival chances of salmon at sea by influencing the fitness of smolts.

Research tasks

Understanding the influence of biological characteristics (eg size) of Atlantic salmon smolts on their marine mortality.

The impact of physical factors in fresh water (eg water flow and temperature) on marine mortality.

The influence of freshwater contaminants on marine mortality.

The part played by key predators in estuaries and inshore waters.

The impacts of aquaculture (eg disease, parasites and hybridization) on the mortality of salmon.

Many of these research tasks are being covered by work that is already underway, funded by national agencies or partnerships with national agencies. Coordination of these will be improved and existing programmes expanded within the SALSEA initiative.

Information – Communication and Education
To add the force of general opinion to their expert advice, the scientists working on these and related projects need to communicate the vision, ongoing progress and findings of SALSEA to the world, particularly to the people and powers who can take appropriate and relevant action to change what can be changed. The IASRB website needs to be developed to provide a means for SALSEA

participants to make available their knowledge on research methods and approaches, improvements in technology and progress reports on research

SALSEA has the potential to capture the public imagination. A vigorous international outreach programme, supported by an imaginative web site, would inspire all who want to see the King of Fish secure in the great rivers of Europe and North America. Aimed at all sectors of society, the website should include material for the education of schoolchildren, fishermen and the general public in the mysteries of the salmon's migrations, its decline in numbers, and the importance of reversing this decline.

Saving the North Atlantic Salmon

There can be no doubt that the answer to why the wild North Atlantic salmon numbers are declining lies in the deep sea. The SALSEA initiative, based on a sound theoretical and technical framework, offers the only opportunity to halt and reverse this decline. The task is urgent. Existing funding is inadequate to meet fully the demands of this urgency.

The governments that sponsor NASCO and the IASRB already provide annual funding in excess of £4 million, underpinning infrastructure and basic activity. They have also supported much of the river and laboratory research undertaken over the last twenty years. However, studying salmon at sea is not like studying salmon in the laboratory or the river. For a start it is a lot more expensive: a single dedicated 25-day research voyage costs approximately £500,000. Careful planning and cooperation with other agencies can keep the costs down. But time is not on the side of the wild North Atlantic salmon. Its plight is becoming increasingly urgent. Solutions must be found before it is too late.

The SALSEA programme urgently needs an additional £7.5 Million (£1.5 Million in each year for the next five years) to understand in full the life of the wild North Atlantic salmon and to advise how to save it. The International Atlantic Salmon Research Board seeks the financial help of all who delight in this magnificent creature to support this vital task.

Appendix D - Gift chart

TEST GOAL: £ 7,500,000

	Gift size £	Prospects required	No of gifts	Total £	Cumulative total £
Pacesetting Gifts					
	1,000,000	3	1	1,000,000	1,000,000
	500,000	6	2	1,000,000	2,000,000
	250,000	18	6	1,500,000	3,500,000
Leadership Gifts					
	100,000	30	10	1,000,000	4,500,000
	50,000	60	20	1,000,000	5,500,000
	25,000	120	40	1,000,000	6,500,000
Major Gifts					
	10,000	120	40	400,000	6,900,000
	5,000	180	60	300,000	7,200,000
	2,500	240	80	200,000	7,400,000
Other gifts	Under 2500		Many	100,000	7,500,000
TOTALS		777	259	7,500,000	7,500,000

DISTRIBUTION

Top 9 gifts	£	3,500,000	46.67%
Next 70 gifts	£	3,000,000	40.00%
Balance	£	1,000,000	13.33%
TOTALS	£	7,500,000	100%