

NASCO'S FUTURE: A VISION STATEMENT

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The views expressed in this publication are solely those of the authors.

A Vision Statement on the Future of the North Atlantic Salmon Conservation Organization (NASCO)

NASCO was created by the Convention for the Conservation of Salmon in the North Atlantic Ocean in 1983. Contracting Parties include countries with Atlantic salmon rivers – Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Iceland, Norway, the Russian Federation and the United States of America. The Convention prohibits fishing for salmon beyond areas of fisheries jurisdiction of the Parties. NASCO is an international organization that promotes the conservation, restoration, enhancement and rational management of Atlantic salmon stocks in the North Atlantic Ocean through international cooperation.

This Vision Statement has been produced by a panel of four distinguished figures with long experience in NASCO affairs. It was convened by the Atlantic Salmon Federation and World Wildlife Fund. The four panelists met in Halifax, Nova Scotia on January 10 and 11, 2004, to reach agreement on the content and format of the Vision Statement and Agenda for Action, as well as the process for completion of the statement.

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Bjørnulf Kristiansen is a section leader in the Norwegian Farmers Union in Oslo, responsible for management of natural resources. He has had a long career in this field, stretching over 40 years, mainly in Norway but also in Denmark and the U.S.A (Alaska). Much of his work has involved the Atlantic salmon since the Norwegian farmers as landowners possess the fishing rights in the rivers and the salmon has always been a very important resource for them and the local communities. He has also represented the farmers union in a number of government commissions and working groups dealing with resource management. The most recent was the salmon commission, whose advice and conclusions have been important in the development of Norwegian national management policy for Atlantic salmon. He has also been active in establishing the organization Norske Lakseelver (Norwegian Salmon Rivers) where the most important salmon rivers are members. NSR is a central factor in salmon management today and is also an important partner for the farmers union. Mr. Kristiansen became a member of the Norwegian delegation to NASCO in 1991. The Norwegian Farmers Union was given NGO status in NASCO in 1992 and Mr. Kristiansen has represented the union in NASCO since then.

Chris Poupard is Chairman of the NGO group at NASCO. He has had a long career in fish farming, fisheries management, and fisheries administration. Chris was a member of the Unilever team that developed the first commercial process specification for farming Atlantic salmon in Scotland in the late 1960s. He went on to manage the then largest rainbow trout farm in Scotland, at Gateway West Argyll, and then became part of Shell's Fish Opportunity Group, developing a worldwide fish farming strategy for the Shell Group of Companies. Working with Blue Circle Industries in the 1980s, he developed award-winning sport fisheries in England and in 1992 was appointed as Director of the UK Salmon and Trout Association, the governing body of game fishing in England. In 1994 he helped launch the European Anglers Alliance, which represents Europe's 25 million anglers, and he remains a Board member of that organisation. He is also Chairman of the UK Environment Agency's Thames Region Fisheries, Ecology and Recreation Advisory Committee and a Fellow of the Institute of Fisheries Management.

Andrew A. Rosenberg is the Dean of the College of Life Sciences and Agriculture at the University of New Hampshire, a position he has held since August of 2000. In addition to his administrative responsibilities, Dr. Rosenberg has an active research program on the science and management policy for renewable resources. He is a member of the National Ocean Policy Commission and a Senior Fellow with the World Wildlife Fund. Dr. Rosenberg was the Deputy Director of NOAA's National Marine Fisheries Service from 1998-2000, the senior career position in the agency. He also has served as the head of the U.S. delegation to NASCO from 1995 to 2000, as well as head of delegation to the North Atlantic Fisheries Organization and FAO. As NMFS Northeast Regional Administrator, Dr. Rosenberg negotiated and implemented the recovery program for New England fisheries, reversing overfishing and resource declines on George's Bank as well as other areas for groundfish and scallop fisheries. He also worked to develop and implement marine mammal recovery programs and endangered species protections throughout the northeast. He was on the faculty of Imperial College of Science and Technology in London for six years and was the Deputy Director of the Renewable Resources Assessment Group, an internationally known quantitative analysis and policy consultancy group.

NASCO AT THE CROSSROADS

After twenty years of operation, the North Atlantic Salmon Conservation Organization (NASCO) faces a critical choice in defining its role. It can be the principal instrument in restoring Atlantic salmon stocks to healthy, sustainable levels by taking resolute action on the full range of threats to wild salmon, or it can continue to operate with very limited power to act on those threats. If the "King of Fish" is to survive, NASCO must adopt a new vision of its role that is broader, more activist and more oriented toward outreach and non-governmental participation than the role that has evolved in practice over the years. As participants in NASCO deliberations, whose experience spans its entire two decades of operation, we propose a new vision of a more dynamic role for NASCO in salmon conservation.

NASCO was originally established as an international forum for Atlantic salmon management as the result of an idea put forward by NGOs in 1979. The overwhelmingly dominant issue at that time was the need to regulate Atlantic salmon catch in areas far from their spawning rivers. Since NASCO was established, it has achieved notable successes in that regard. It has been able to ban fishing for Atlantic salmon beyond areas of national jurisdiction, end fishing for salmon in the Norwegian Sea, and reduce salmon catches dramatically off Greenland and the Faroe Islands. All of the authors of this statement have been involved in the organization's work, and we are proud of what has been accomplished.

But despite these achievements, NASCO must become more effective than it has been in the past. Wild Atlantic salmon stocks have declined world-wide by an

estimated 50 percent from the levels of 1983 when the Convention came into force. Throughout the Atlantic salmon's southern range, many populations are on the verge of extinction. All the wild salmon populations of the United States have been listed as endangered. Apart from continued harvesting of salmon in home waters, other threats to the health of salmon stocks have now been recognized as important, including damage to salmon habitats (pollution,



The wild Atlantic salmon represents the very essence of wild, free-flowing rivers and healthy ocean ecosystems, and is an important part of the world's cultural, economic and recreational heritage.

barriers to salmon migration and changes to water flow or the structure of the river bed), interactions between farmed salmon and wild salmon, and various factors that have dramatically reduced the survival of wild salmon at sea (e.g., by-catch in pelagic fisheries, marine temperature changes, predation and depleted food supplies). In some cases, the relative abundance of wild salmon at the time NASCO was estab-

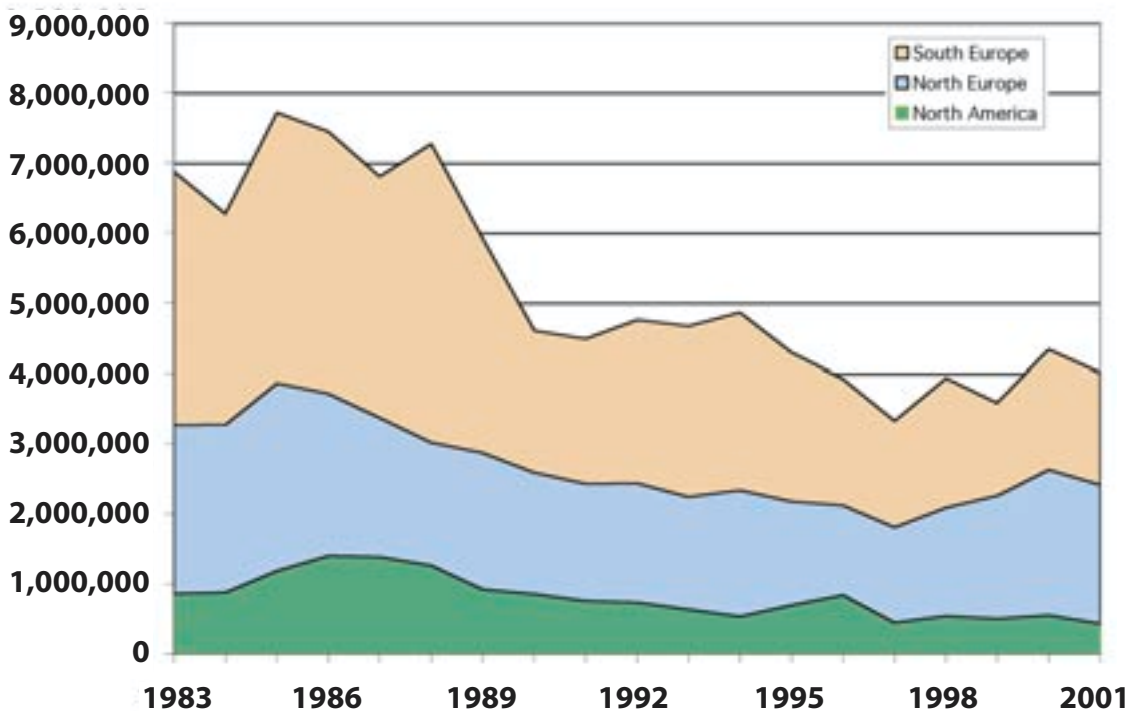
lished may have obscured the impact of these factors on wild salmon stocks; in other cases, these new threats have clearly become more serious over time. In any case, the original mandate guiding NASCO has been overtaken by events.

NASCO has made adjustments to these new threats by adopting the Precautionary Approach to fisheries management, recognizing the potentially damaging effects of salmon aquaculture on wild Atlantic salmon stocks, and addressing the importance of salmon habitat to the conservation and restoration of the stocks. But in attempting to shift to a different set of challenges, NASCO has been constrained by the fundamental contradiction between a new set of requirements for action and the original mandate of the organization.

NASCO meetings seem to lack the urgency one might expect, given the alarming reductions in populations of Atlantic salmon. We do not believe this is because Member States are unconcerned about the fate of Atlantic salmon. They may feel, however, that they have accomplished everything that was demanded by the original mandate of NASCO. Or this lack of authority may constrain them from taking politically difficult decisions on salmon conservation measures within their own jurisdictions. In this sense, NASCO may be likened to a crustacean that needs to molt but has not been able to do so. It has entered a new stage of its development requiring substantial growth, but it has not yet shed its original carapace, which was fine in its earlier stage of development but is now far too confining.

Wild Atlantic Salmon Numbers

Based on ICES Prefishery Abundance, including both grilse and salmon



THE NEED FOR A BROADER MANDATE

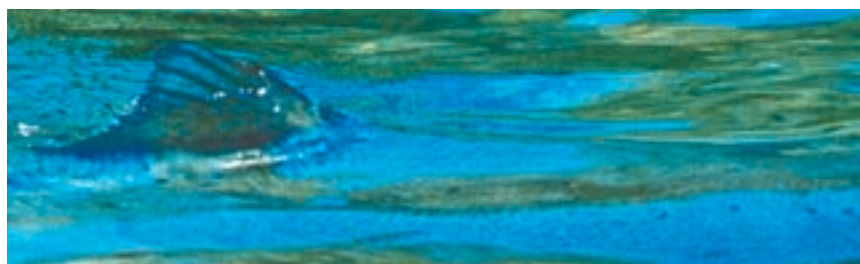
If NASCO is to act with sufficient energy and effectiveness on the full range of threats to wild Atlantic salmon, it must have a new mandate appropriate to the critical challenges it now faces. When NASCO was founded, fisheries managers believed that it would be enough to focus on the exploitation of Atlantic salmon on the high seas beyond the jurisdictions of the Member States. Now, however, the international community has formally recognized, in the FAO *Code of Conduct for Responsible Fisheries*, adopted at the Twenty-eighth Session of the FAO Conference in 1995, that fisheries management cannot be successful without taking an "ecosystem-based" approach. That approach, as outlined in the *Code of Conduct*, is concerned with conserving aquatic ecosystems (Article 6.1) and takes account of the full range of factors affecting the ecosystem across the "entire area of distribution" (Article 7.3.1). These principles are highly relevant to the conservation of Atlantic salmon stocks, which are vulnerable to threats at each stage of their development, including spawning areas, migratory routes and feeding areas in the ocean. Another implication of this approach is that all commercial fishing that may affect Atlantic salmon stocks – not just fishing targeted on salmon stocks in high seas feeding grounds – must be addressed by NASCO.

The ecosystem-based approach was also a primary influence on the *United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks*, which added significant new principles to the United Nations Convention on the Law of the Sea in regard to fisheries management. The U.N. fish stocks agreement calls for assessing "the impacts of fishing, other human activities and environmental factors on the target stocks" (Article 5.d) and for adopting

appropriate "conservation and management measures" for those species to restore them to sustainable levels (Article 5.e), as well as "plans which are necessary to...protect habitats of special concern" (Article 6.3.d) not just beyond the fisheries jurisdictions of States but within those jurisdictions (Article 3.1 and 3.2). That agreement further calls for states to closely monitor species, the status of which is in doubt, to review the "efficacy of conservation and management measures" and to revise them regularly in light of new information (Article 6.5). Finally, the *Fish Stocks Agreement* calls on all states to minimize by-catch of non-target species - a norm that is particularly relevant to one of the major threats to wild salmon stocks.

The new vision of the role of NASCO in saving Atlantic salmon must be based on the ecosystem-based approach to management, in keeping with the new norms of international cooperation for sustainable management of stocks of common concern, embodied in the *UN Fish Stocks Agreement and the Code of Conduct*. Thus the NASCO Council must be able to make decisions on measures needed to respond to the full range of threats to Atlantic salmon stocks in the North Atlantic area.

At present, however, the Council lacks the legal authority to act on these threats. Article 3.2 of the treaty defines the objective of NASCO as being "contribute through consultation and co-operation to the conservation, restoration, enhancement and rational management of salmon



stocks." However, it limits the scope to those stocks "subject to this convention", which means that authority to carry out that objective is limited by Article 4.2.

Article 4.2 rules out any decision concerning "the management of salmon harvest within the area of fisheries jurisdiction of a Party." The only exception to this prohibition is a recommendation to one of the NASCO Commissions on that Commission's request. This language has been interpreted by Member States as denying the NASCO Council the authority to do anything more than make recommendations on such issues as habitat quality, the precautionary approach to fisheries management and regulation of aquaculture, which are now crucial to the future effectiveness of NASCO. Although the Council has issued resolutions on these issues beyond its formal mandate, it cannot require their implementation.

We believe the time has come for NASCO to seriously consider using Article 19 of the treaty to expand the scope of its formal authority so that it covers the full range of threats to wild salmon. We understand that proposing to amend the treaty would generate some controversy and might not be accomplished in the immediate future. We would welcome alternatives to treaty revision, as long as it would accomplish the same objective in an expeditious manner. If no such alternative approach can be found to strengthen the mandate of NASCO for action on all the present threats to wild salmon, however, we believe that the urgency of the problem demands that strengthening the treaty be tried.

In calling for wider authority for the Council, we are not suggesting that Council should assume the power to

dictate to Member States what they should do to conserve and rebuild salmon stocks in any specific salmon river or what combination of policies it should use to accomplish broader conservation goals across all its salmon rivers. Such authority would be both ineffective and unacceptable. But NASCO must have the authority to decide on certain broad objectives for the health of salmon stocks and for managing major factors affecting wild salmon to be achieved by Member States through such mechanism as national action plans dealing with major management issues. It must also have the authority to monitor the progress made by Member States in meeting these objectives. Such authority, similar to that which has been given to the Conference of the Parties of Biodiversity Convention and to other treaty bodies, would allow Member States the flexibility to apply specific policy measures as appropriate to their individual national situations, while making their actions in implementing NASCO decisions transparent.

Equally important, in keeping with this broader vision of an integrated ecosystem-based approach to the task of protecting and restoring salmon stocks, NASCO must take all commercial fishing activities in the North Atlantic as relevant to the scope of its work. Thus, we call on NASCO to establish relationships of active collaboration with the other regional fisheries organizations in the North Atlantic – the Northwest Atlantic Fisheries Organization and the North East Atlantic Fisheries Commission – on the adoption of policies needed to reduce by-catch of salmon in those fisheries – a major problem that is now beyond the purview of the organization.

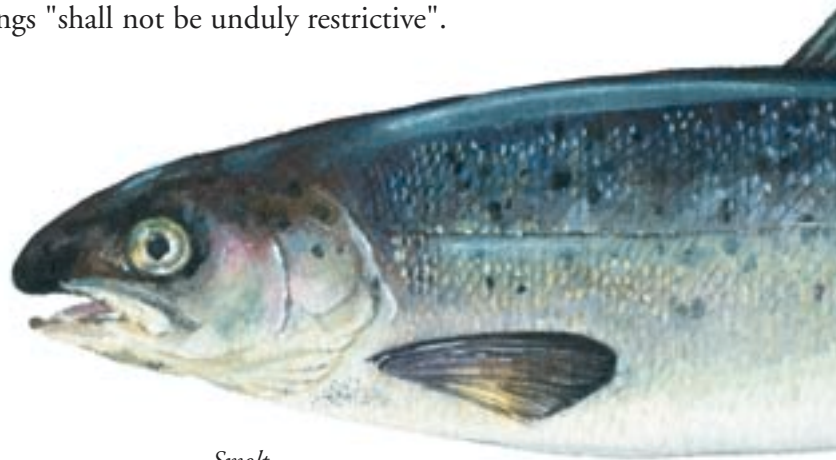
GREATER OUTREACH AND PUBLIC PARTICIPATION



Without much greater public awareness of the threats to Atlantic salmon stocks and the actions needed to address them, NASCO has little prospect of achieving its goal of restoring salmon stocks to sustainable levels. NASCO has been working far too much in the shadows, with the result that it has generated very little media attention or public recognition. A vision of a more effective NASCO must also include, therefore, a proactive strategy for increasing public awareness, including more aggressive efforts to create media interest in NASCO decisions and progress in implementing them and greater openness to participation in its activities by non-governmental organizations.

In this regard, NASCO should adopt a more open and transparent style of work

that welcomes and encourages the active participation of non-governmental organizations. The U.N. Fish Stocks agreement provides a clear norm for NGO participation in regional fisheries organizations, stating in Article 12, that the procedures of regional fisheries organizations governing the participation of NGOs in their meetings "shall not be unduly restrictive".



Smolt

AN AGENDA FOR ACTION

Based on this new vision of a reinvigorated NASCO role in saving Atlantic salmon, with a new legal mandate, a new guiding principle of ecosystem-based management and a new orientation toward public awareness and NGO participation, we propose the following agenda for action aimed at achieving dramatic progress on several fronts over the next several years. This agenda for action will be elaborated in more detail in a companion document.

1. Establish a Working Party to consider various ways of strengthening NASCO, including adding new language to the treaty to broaden its legal authority.

A NASCO Working Party should be formed at the 2004 meeting to consider and recommend to the Council various ways of reinforcing NASCO so that it can act more decisively and urgently to deal with all threats to wild Atlantic salmon throughout their North Atlantic range. It should hear proposals for adding new language to the NASCO Convention to give the organization a broader legal mandate, as well as for actions that can be taken without amending the Convention, such as more transparent reporting.

2. Develop a common strategy with other North Atlantic fisheries organizations for minimizing pelagic by-catch.

NASCO should work closely with NEAFC and NAFO to develop joint strategies for minimizing by-catch of salmon in fisheries managed by these organizations.

3. Strengthen the role of NASCO in habitat conservation and restoration.

NASCO should establish a clear mandate to establish broad targets for habitat conservation and restoration, to be achieved through policies and methods to be determined by the Member States, and to require reporting to NASCO of progress in achieving those targets.

4. Make a stronger push for the establishment of river-by-river Conservation Limits in all salmon rivers.

NASCO should establish a new mandate to guide national efforts to create river-by-river conservation limits. In cases where data is not available for the calculation of such a limit, NASCO should establish a default conservation limit.

5. Require strict enforcement of Conservation Limits in mixed stock fisheries.

NASCO should require that all countries other than Greenland and Faroe Islands conducting Atlantic salmon fisheries within their 12-mile limits monitor and enforce regulations necessary to ensure that all stocks harvested meet their annual conservation targets. If it cannot be demonstrated that all stocks harvested in a mixed-stock fishery do meet their annual conservation targets, NASCO should call for the closure of the fishery by the Member State in question.

AN AGENDA FOR ACTION

6. Launch an initiative on endangered populations.

NASCO should launch a special initiative, based on the mechanism of national plans and detailed national reporting, that gives high priority in national salmon policies to the recovery of endangered populations of Atlantic salmon.

7. Initiate negotiations toward an international regime on aquaculture management to protect wild salmon.

While continuing to develop measures for regulation of aquaculture to minimize its impact on wild salmon stocks, NASCO should add that subject to its legal mandate. In the longer-run NASCO should initiate a process of negotiating an international regulatory regime for management of aquaculture to protect wild salmon stocks.

8. Create a new methodology for estimating unreported and illegal catch.

NASCO should hire an appropriate independent specialist to create a new methodology for estimating illegal and unreported catch to be applied by all Contracting Parties.

9. Develop a plan with NGOs for partnership in regard to prioritization of research and funding for research on marine survival.

Based on the principle that the International Salmon Research Board should work in partnership with NGOs in serving as a clearing house on research on salmon survival at sea and in raising funds for such research, NASCO should work with relevant NGOs on a plan for cooperation in carrying out those tasks.

10. Adopt a new strategy for public awareness, openness and NGO participation.

NASCO should adopt a broad strategy with specific goals for greater public awareness. These goals should include increasing the participation in its activities by NGOs, in part by revising the present rules of procedure for NGO participation in meetings, devising new mechanisms for collaboration with NGOs to enhance public understanding, and establishing a new policy on enhanced relations with the media.

11. Publish an annual official NASCO report on the status of Atlantic salmon stocks.

NASCO should issue its own annual report, in non-technical language, on how salmon populations are faring, to the general public as a central element in its strategy for generating more public awareness and support for the measures necessary to save threatened salmon populations.

*This section expands on “NASCO’s Future:
A Vision Statement”*

1. Establish a Working Party to consider various ways of strengthening NASCO, including adding new language to the treaty to broaden its legal mandate.

NASCO was born more than twenty years ago out of an initiative that reflected the urgency of the need for measures to limit fishing for Atlantic salmon on the high seas. With many Atlantic salmon populations continuing to decline in recent years, despite NASCO efforts to address new threats, the organization needs to consider dramatic new initiatives to increase the effectiveness of its efforts. The most appropriate mechanism for carrying out such a reevaluation would be a Working Party, with representation from each NASCO Contracting Party, with a special mandate to hold a series of meetings in which it hears proposals from both government and non-government representatives for ways of making NASCO more effective in conserving and restoring salmon populations.

One category of proposals would be for amending the present text of the *Convention for the Conservation of Salmon in the North Atlantic Ocean* in order to broaden the legal mandate of the organization, which is now limited to offering only advisory statements on salmon management and conservation policy in regard to stocks within the national jurisdiction of members. As argued in greater detail below,

NASCO Council resolutions and guidelines on habitat conservation and restoration, fisheries management or regulation of aquaculture are now viewed as voluntary rather than required by Member States. These decisions would have greater authority if it was clear to all that the organization had a legal mandate to call for actions on matters within the fisheries jurisdiction of the Member States. A Working Party should examine proposals for the use of Article 19 to amend the Convention to provide that additional authority.

However, other actions that do not require amending the Convention should also be considered by such a Working Party. One thing that NASCO could do without waiting for any legal change is to establish much clearer and more detailed requirements for reporting by Contracting Parties on the measures they have taken in response to various Council resolutions and plans. Contracting Parties could show their seriousness by committing themselves to greater transparency in regard to the changes they have made and are in the process of making to reduce threats to salmon populations. Other actions not requiring any legal change are suggested below.

STRENGTHENING NASCO

2. Develop a common strategy with other North Atlantic fisheries organizations for minimizing pelagic by-catch.

NASCO has recognized that by-catch of post-smolts may be a significant cause of low salmon survival at sea. The Council has long been concerned about fisheries for pelagic species in the North-East Atlantic Fisheries Commission area that overlap spatially as well as temporally with the migration of salmon post-smolts.

Preliminary research by scientists from Norway during a research cruise in the Norwegian Sea during 2002 where they sampled a total catch of more than 19000 kg of mackerel which represents 44 hauls, found that the ratio of post-smolt numbers per kg of mackerel was 0.026 in the international zone. This area was not surveyed in 2001. In the Norwegian EEZ, the result was 0.057 post-smolts per kg mackerel in 2002.

Both mackerel and herring fisheries overlap with the northward feeding migration routes of European post-smolts, and European purse seine vessels have long targeted large concentrations of herring. This overlap raises the possibility that by-catch of salmon post-smolts may be considerable, and could offer a partial explanation for the dramatic decline of marine survival of salmon. The question was referred to the Board of the International Salmon Research Programme.

Even though the evidence of salmon by-catch in pelagic trawl fisheries is preliminary, it indicates the need not only

for much more serious efforts to research the problem, but also to institute the needed precautionary measures for all North Atlantic fisheries with the potential to catch salmon, in order to minimize the risk of such by-catch. In order to accomplish both objectives, NASCO needs close and systematic collaboration with the Northwest Atlantic Fisheries Organization (NAFO) and the North East Atlantic Fisheries Commission (NEAFC). Such collaboration should include both joint programmes for closer surveillance of pelagic trawl fisheries for species that might overlap with migration routes of salmon post-smolts, such as herring, mackerel and blue whiting, and the development of special precautionary measures to protect post-smolts from those fisheries.

Those organizations do not have management responsibility for anadromous stocks such as Atlantic salmon "insofar as they are dealt with by other international agreements", but they do have explicit responsibility for minimizing by-catch of all non-target species under the *U.N. Fish Stocks Treaty*. By-catch should be a major issue, on which NASCO and the two other regional fisheries organizations in the North Atlantic region should collaborate. Special conservation measures aimed at minimizing by-catch of Atlantic salmon in the fisheries under their respective jurisdictions, based on the precautionary approach, are urgently needed.

STRENGTHENING NASCO

3. Strengthen the role of NASCO in habitat conservation and restoration.

For many years, it has been clear that one of the major factors in the decline in recruitment of both maturing and non-maturing salmon is the deterioration of freshwater habitats. Salmon rivers have been altered, primarily for the generation of hydro power and to supply water for domestic, agricultural and industrial use and for other social and economic purposes. The result has been reduced water flow and water quality in salmon spawning grounds, which has negatively affected both salmon reproduction and survival in those rivers. Dams, weirs, fords and culverts may be insurmountable barriers to upstream spawning migration for adult salmon and to downstream juvenile migration, causing declines in salmon population. Intensive agricultural practices have led to eutrophication of rivers and large quantities of fine organic sediments, which reduce concentrations of dissolved oxygen to the point of increasing salmon mortality. Acid rain and hormone disruptors associated with herbicide runoff impair salmon reproduction. To restore salmon populations, many rivers must be restored and protected from both point source and, even more challenging, from pollution from diffuse sources.

In 2001, NASCO adopted a *Plan of Action* based on the Precautionary Approach for the protection and restoration of Atlantic Salmon habitat. It laid down a set of "guiding principles" for activities on salmon habitat and called for development of national salmon habitat protection and restoration plans. The purpose of the Plan of Action, as articulated in the document, was to ensure that decision-making on

national and sub-national policies on sectoral activities that impact on salmon habitats is "transparent to all the other parties involved." The *Plan of Action* calls for inventories of rivers to be regularly updated, and for national plans for salmon habitat protection and restoration that identify risks to salmon habitats and put the burden of proof on proponents of any activity that might have an adverse impact on such habitats. Habitat plans are supposed to restore the productive capacity of Atlantic salmon habitat in "designated areas".

By 2003, however, the reports of NASCO Contracting Parties in regard to progress in formulating and implementing their national action plans indicated that no Contracting Party has followed these guidelines. None of the reports provide evidence of actions in specific rivers that will restore a specific level of productivity, and none indicate that the burden of proof is being placed on proponents of activities that are likely to harm salmon habitats. Some key nations in terms of numbers of salmon rivers have not submitted reports on their national plans. The lack of more energetic responses by Contracting Parties suggests that they do not regard NASCO as having real authority in the issue of habitat protection and restoration, and that action is therefore voluntary rather than required. This indication of lack of real authority on such a central issue in the future of Atlantic salmon habitat protection and restoration underlines the need for broadening the legal mandate of the NASCO Council to include the issue by amending the Convention.

STRENGTHENING NASCO

4. Make a stronger push for establishment of river-by-river Conservation Limits in all salmon rivers.

The NASCO Council has also applied the Precautionary Approach to the issue of conservation and management measures for Atlantic salmon stocks. It reached agreement in 1998 that the Precautionary Approach requires that stocks be maintained above levels known as "Conservation Limits" -- levels of abundance of salmon that are adequate to assure that populations will not decline. These limits are to be set for each river and are to be accompanied by agreements on management actions, including habitat improvement stock enhancement and fishery management actions, to be taken in the event the conservation limits are exceeded.

In 2000, the Council adopted a "decision structure" on a trial basis to be applied by each Contracting Party in a set of rivers with different status and management policies. The decision structure was revised in 2002, and was to be incorporated without delay into management plans and operations during 2002-2003. Contracting Parties were to report in 2003 on their experiences applying it, based on a simple common reporting format, calling for specific Conservation Limits or Management Targets, description of the status of the stocks relative to the abundance criteria used, threats to the stocks and management action to be employed if the Limits are exceeded.

At the NASCO meeting in 2003, however, only Ireland and Northern Ireland reported that they were applying the Precautionary approach or the Decision

Structure in selected rivers. England and Wales as well as Scotland reported only that they were considering that option, whereas Norway had only added the concept to their guidelines for a 5-year regulatory regime. Canada did not submit a report on its progress. In short, the Contracting Parties have responded to the Council's decision on the Precautionary Approach to conservation and management measures with much less urgency than is needed.

This lack of urgent action on the issue of Conservation Limits suggests that NASCO should therefore strengthen the legal mandate of the Council to lay down basic principles of management such as the river-by-river conservation limits and to coordinate national efforts to carry out such measures and to require full and transparent reporting by the Contracting Parties.

The 1998 agreement on the Precautionary Approach calls for a request to ICES to provide such stock Conservation Limits and management targets for all river stocks. However, ICES has been unable to provide such limits except for a limited number of rivers within the Contracting Parties, citing the absence of specific data necessary to calculate such a limit. As an additional spur to the Contracting Parties to adopt their own river by river Conservation Limits, NASCO should ask ICES to establish a default conservation limit using the number of spawners per unit area or similar broadly applicable standard.

STRENGTHENING NASCO

5. Require strict enforcement of Conservation Limits in mixed stock fisheries.

Mixed population fisheries within the territorial waters of NASCO Contracting Parties present a special issue in enforcing Conservation Limits. These mixed population fisheries in the territorial waters of England, Ireland, Scotland and Norway intercept salmon migrating to various rivers located in those countries as well as salmon migrating to other Contracting Parties. The existence of these interceptory fisheries has hindered negotiations between NASCO and Greenland and Faroe Islands, which have argued that the benefits from their restrictions on the harvest of mixed populations in international waters are undermined by

the harvest of these same salmon populations in the territorial waters of their rivers of origins.

NASCO, which has already called for Conservation Limits in all mixed-stock fisheries in the territorial waters of Contracting Parties, should now take effective action to enforce Conservation Limits in such mixed-stock fisheries. It should require that any stocks harvested within the twelve-mile limits must meet their annual conservation targets. If the stocks fail to stay within their Conservation Limits, NASCO should call for an end to those fisheries by the Contracting Party in question.

6. Launch an initiative on endangered populations.

The threat of extinction of salmon populations is an immediate and urgent issue for NASCO. Wild Atlantic salmon have already completely disappeared from at least 209 river systems in Europe and North America since the creation of NASCO in 1983. In a detailed unofficial analysis of the status of salmon rivers published in 2001, another 240 rivers in 14 countries are classified as "Critical", because they are in imminent danger of disappearing from the river if the threats to their extinction are not swiftly reduced.¹ These are rivers which have met very low percentages of their spawning targets in the two most recent recorded years, have fewer than 50 spawners or have suffered a decline in populations of an order of magnitude within a relatively few years.

Those rivers which are not immediately likely to suffer local extinction of their wild

salmon populations but threatened with such extinction in the longer run have been categorized as "endangered". Atlantic salmon were considered endangered in 401 rivers in 12 countries. These salmon populations, facing imminent and longer-term local extinction, are subject to the existing NASCO requirements for conservation measures, including Conservation Limits and measures to be taken in response to any failure to remain within those Limits, as outlined above. But the inevitably gradual international processes of decision-making based on general norms and broad national plans for conservation will not be sufficient to save these salmon populations on the edge of extinction.

NASCO should develop a special initiative that focuses political attention and resources as a matter of highest priority on these Atlantic salmon populations at

¹ *The Status of Wild Atlantic Salmon: A River by River Assessment* (Washington, D.C.: Marine Conservation Program, World Wildlife Fund, 2001), Figure 2a, p. 7.

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gravest risk of extinction. Such an initiative could initially take the form of a special resolution on NASCO action on the problem that creates institutional mechanisms to ensure that it gets continuing, systematic attention. An initiative on endangered populations should not be isolated, however, from the major existing NASCO efforts on habitat conservation and restoration,

Conservation Limits and management measures and regulation of aquaculture. In each case the special needs of those populations in rivers in the two categories at greatest risk of extinction should be given top priority. National plans should have clear indications of how the "Critical" and "Endangered" populations are being given highest priority.

7. Initiate negotiations on an international regime on aquaculture management to protect wild salmon.

NASCO has long acknowledged that salmon farming, unless properly regulated, can have very serious consequences for wild salmon. Of particular concern to NASCO have been the large escapes of farmed salmon as well as the routine leaking of farmed salmon from aquaculture pens, which have put so many farmed salmon in some rivers that they overwhelm the numbers of wild salmon. NASCO has adopted five agreements on regulation of salmon aquaculture, beginning with the *Oslo Resolution* of 1994, and they have now been consolidated into the "Williamsburg Resolution". That resolution contains a number of important norms for regulation of aquaculture to ensure that it does not harm wild salmon, and it requires that Contracting Parties report annually on any changes in regard to each of the issues in the resolution.

In the decade since the Oslo Resolution was first adopted by NASCO, the Contracting Parties with aquaculture industries have done relatively little to make these norms a reality in their regulatory practices. A study of progress by the NASCO Contracting Parties in implementing the Oslo Resolution, published by WWF and ASF in 2003, showed that the

seven countries with such industries had failed, in most cases, to meet more than barest minimum of standards for regulation of their industries, based on ten leading criteria in the resolution itself.² Reporting by these Parties, moreover, has often been minimal and sometimes even misleading.



Although some governments are now taking important actions to improve their regulatory systems, NASCO has a long way to go to achieve controls on the aquaculture industry sufficient to stop the continued damage to wild salmon stocks. NASCO should continue to refine its norms for regulatory systems, as it recently did in regard to stocking practices. NASCO has already developed containment guidelines, but these need to be further strengthened. Guidelines could also

² Gareth Porter, *Protecting Wild Atlantic Salmon from Impacts of Salmon Aquaculture: A Country-by-Country Progress Report* (Washington, D.C. and St. Andrews, NB.: World Wildlife Fund and Atlantic Salmon Federation, 2003)

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be developed for inspection processes and regulations regarding disease and parasite control. Even more important would be the adoption of a more aggressive monitoring and reporting system on aquaculture regulation, under which failures to implement the norms adopted by NASCO would be made public. This would provide a spur to Contracting Parties to take their responsibilities for regulation of aquaculture more seriously than has been the case in the past decade.

NASCO must recognize, however, that the salmon aquaculture industry in each NASCO country is subject to intense pressures of international competition for markets, which exerts strong downward pressure on regulatory standards. Each national industry seeks to avoid regulations that add to their production costs, on the

grounds that industries in other countries are not bound by similar regulations. This fundamental economic factor makes an international legal approach to the problem necessary. The salmon aquaculture industry in each country should be subject to exactly the same legal requirements as the industry in every other country.

NASCO Contracting Parties should add salmon aquaculture regulation to the organization's legal mandate by amending the Convention, so that it can play a more constructive role in addressing this problem. Over the next few years, NASCO should broker an international agreement that eliminates any downward pressure on national regulations on salmon aquaculture from international competitiveness concerns and thus more effectively protect wild Atlantic salmon.

8. Develop a new methodology for estimating unreported and illegal catch.

As is the case with all other fisheries, unreported and illegal catches have been a constant problem for Atlantic salmon fisheries. According to official estimates, unreported and illegal catches have been one-third and one-half of the total salmon catch, but the figures are very much in doubt. Catch statistics could be seriously distorted, with far-reaching consequences for salmon management decisions, unless estimates of illegal and unreported catch are reasonably accurate. The Council has introduced a system of transparent reporting of data on estimated unreported catch. However, NASCO still has little basis for evaluating the estimates of unreported and illegal catches being reported to it, because it does not have

complete information on the methodologies used. Those methods have not been consistent across the Contracting Parties, reducing the credibility of the data they generate. Furthermore, some Parties have not reported their methodologies at all.

In order to restore credibility to the data on unreported and illegal catch and to establish a more reliable basis for management measures, NASCO should create a common methodology for such estimates to be applied by all Contracting Parties. An appropriate independent specialist on salmon fisheries statistics should be hired to develop the methodology to be used, which would then be adopted by all Contracting Parties unless a new decision is made to set it aside.

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9. Develop a plan with NGOs for partnership in regard to prioritization of and funding for research on marine survival.

In view of the evidence that the marine mortality of Atlantic salmon has significantly increased, NASCO inaugurated the International Cooperative Salmon Research Board at its eighteenth meeting in 2001. The Board was assigned the task of improving coordination of research on salmon mortality at sea and seeking funds to finance existing gaps in research. These objectives can best be achieved in close collaboration with the NGOs which can

contribute both knowledge of salmon research issues and close working relations, developed over many years, with private funding institutions for work on freshwater and marine conservation issues. NGOs could also help work for more government funding on behalf of NASCO. NASCO should consult with NGOs on formulating a formal plan for partnership on strategies for funding of research on marine survival.

10. Adopt a new strategy for public awareness, openness and NGO participation.

Raising the profile of Atlantic salmon in the general public consciousness and increasing public understanding of the actions required to save salmon populations are central to the success of NASCO efforts in the coming years. After twenty years of operating outside public awareness and with limited participation by NGOs in its meetings, NASCO needs a new public outreach and participation strategy. In consultation with NGOs, NASCO should prepare a strategy to increase public awareness of the threats to North Atlantic salmon populations and the efforts needed to save them. The new outreach strategy should include ways of collaborating with NGOs on increased efforts to increase public understanding and new policies toward media relations. This new strategy of openness and public outreach should be guided by a set of concrete objectives.

The NASCO collaboration with interested NGOs on public outreach would focus

in raising the profile of Atlantic salmon in the public consciousness through publications, conferences, websites and other means. As part of a broader strategy of openness and outreach, NASCO should be prepared to revise the present rules of procedure governing NGO participation in NASCO meetings. Building on progress already achieved, NGOs should now be given a full participative role at NASCO meetings. This vision statement and Action Program are based on the belief that the success of the NASCO endeavor depends on more public knowledge of the issues and even more public pressure for action.

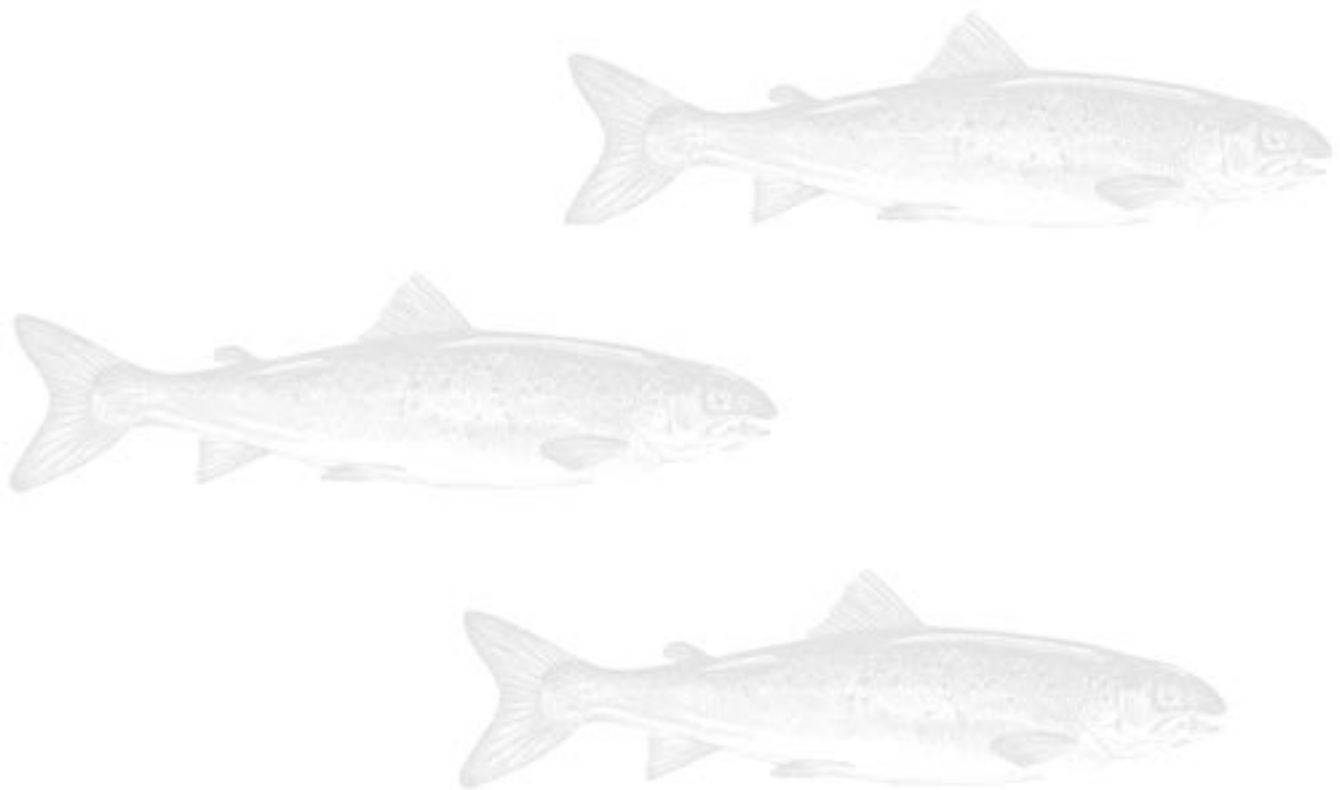


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11. Publish an annual official NASCO report on the status of Atlantic salmon stocks.

One initiative that NASCO can take to make itself more visible and its work more understandable to the public is to issue an annual report on the status of North Atlantic salmon stocks, which would both underline the dangers facing wild salmon and refer to any changes that have taken place in the previous year, whether positive or negative. The ICES Advisory Committee on Fisheries Management already provides a formal review of the status of NASCO stocks each year, in response to NASCO requests, which is part of the official record of the

NASCO annual meeting. However, these reports are written in scientific-technical language and are not accessible to the media or general public. NASCO could help build political support for salmon conservation by writing an annual report, based on the scientific information in the ICES report, but written in non-technical language that can be understood by the media and the public. This annual report on the status of Atlantic salmon populations could be the flagship initiative in the new outreach strategy of NASCO.



NASCO's FUTURE:

A VISION STATEMENT

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