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External Performance Review

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NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION EXTERNAL PERFORMANCE REVIEW

EXECUTIVE SUMMARY

I. Introduction

As stipulated in the Terms of Reference, the purpose of the external performance review was to assess the performance of NASCO since its establishment in 1984 against the objectives set out in the Convention and other relevant international instruments addressing the conservation and management of aquatic living resources. The review was to take into account the NASCO 'Next Steps' process, resolutions of the General Assembly on sustainable fisheries and the criteria attached as Annex 1 to the Terms of Reference, as appropriate (Appendix I).

While the criteria provided guidance to the Panel in assessing the work of the Organization, some criteria were only marginally relevant. It was thus necessary in some instances to assess the work of the Organization against other generally accepted principles and examples of best practice in order to conduct a comprehensive and thorough performance review.

II. Structure and content of the report

With some variation, the structure of each chapter of the report consists of a background presentation, followed by analysis and recommendations. In addition to the Introduction and the Background and History, the report covers the NASCO 'Next Steps' Process, the Convention on the Conservation of Salmon in the North Atlantic Ocean, Conservation and Management, Compliance and Enforcement, Decision-making and Dispute Settlement, International Cooperation and Financial and Administrative Issues.

For ease of reference, the recommendations have been presented in boxes in the chapters and listed in a compendium at the end of the report (Appendix II).

III. Summary of the substance of the recommendations

In terms of general comments, the Panel highlights the clear differences in the decisions taken by NASCO based on the rights and obligations in the Convention, which are aimed at controlling fisheries in areas beyond fisheries jurisdiction, and decisions and agreements made in the context of the 'Next Steps' process. These differences are primarily due to the fact that the Convention was adopted in the early 1980's. Since then, fisheries have changed on a global basis and in the North Atlantic and new international fisheries instruments, best practices and priorities have developed at all levels.

The Panel commends the "Next Steps" process and the great efforts made by NASCO to address issues affecting all phases of the salmon life cycle, in the rivers, in estuaries and during the migration from natal waters to the feeding areas in areas beyond fisheries jurisdiction. Importantly, the process has also addressed external impacts, such as habitat

destruction in the rivers, habitat restoration and the effect of aquaculture near salmon rivers, as well as the problem of sea lice.

There is, however, an apparent imbalance and disconnect between the Convention-based decisions and the “soft law” measures that have been adopted in the context of the ‘Next Steps’ process, including in terms of their operation and effect, and in regard to monitoring, control, surveillance and enforcement.

In the past decade, a number of RFMOs have taken steps to update and modernize their conventions, including in response to concerns expressed by the international community on the status of fish stocks and on the work of these organizations. Such a decision in NASCO could serve to correct this imbalance and provide it with the basis to agree on binding, Convention-based measures for all phases and all habitats in the life cycle of the North Atlantic salmon.

Chapter 3 - NASCO ‘Next Steps’ Process

In addressing the 'Next Steps' process, the Panel recommends a continuation of the process, within the framework of the Strategic Approach, which has provided a comprehensive framework for the work to be undertaken.

In the next reporting cycle, the Parties should continue to implement the decisions and to address the issues identified in the Strategic Approach. It will be important for the second cycle to address areas identified in the first cycle of the ‘Next Steps’ process for additional action and consideration should be given to convening an FAR special session on this topic.

The next cycle should focus on assessing the effectiveness of the measures taken by the Parties. Reporting on progress on the social and economic aspects of Atlantic salmon fisheries and on initiatives for endangered populations are also encouraged.

In the long-term, the ‘Next Steps’ process should consider cross-cutting issues, such as climate change.

Chapter 4 – Convention on the Conservation of Salmon in the North Atlantic Ocean

The NASCO Convention was analysed and gaps in a wide range of areas were identified in view of the changed circumstances since its adoption. Because the Convention does not adequately reflect current applicable law and practice, it should be reviewed with a view to strengthening and modernizing the legal mandate of NASCO and the obligations of the Parties. In parallel, or as an alternative, other options should be considered for strengthening and modernization, such as agreement on a legally-binding protocol.

The Panel offers an indicative framework of provisions in an updated instrument, as well as detailed analysis of each article of the Convention and subsequent recommendations for amendment.

The relevant principles expressed in the United Nations Fish Stocks Agreement and other instruments, including the Code of Conduct, should be expressly adopted in NASCO's instruments and in the context of the 'Next Steps' process.

The Council's functions should be reviewed with a view to designating a more pro-active role suitable to addressing current areas of focus and cross-cutting issues and allowing for international relations with a broad range of relevant organizations. The decision-making authority of the Council, both binding and advisory, should be considered and clearly stated. Consideration should be given to empowering the Council to take decisions that are binding on the Parties, in the form of resolutions, protocols or other.

The functions of WCG and NEAC should also be reviewed and updated and, to the extent necessary, harmonized with those of NAC and the Council. The considerations for the Commissions to take into account in exercising their functions should be reviewed, expanded and updated. Regulatory and other measures reflecting the best scientific advice should continue to be set and efforts should be encouraged to develop a risk framework for the Faroese fishery.

The institutional structure of NASCO should otherwise be reviewed and amended, as appropriate, to include subsidiary bodies and the Secretariat. Consideration should be given to the adoption of rules relating to the establishment of NASCO subsidiary and ad hoc bodies. The functions of the Secretary should be reviewed, expanded and modernized.

The duties of the Parties to implement the Convention and ensure compliance with it by their nationals should be reviewed and strengthened, particularly in the context of the current areas of focus of the Organization. To monitor possible IUU fishing, NASCO should consider enhancing cooperation with relevant RFMOs that already have in place MCS systems.

Obligations of the Parties to provide information should be reviewed and updated, consistent with the recommendations of the 'Next Steps' Review Group and the Working Group on Future Reporting.

Chapter 5 – Conservation and Management

The review of conservation and management involved consideration of scientific and other assessments, which was difficult in light of the different approaches in NASCO with regard to fisheries for salmon in the various phases of its life cycle. The various sources of information on the state of salmon stocks also made the task difficult.

Recommendations were made relating to, *inter alia*, information on the rivers database and other information that should be provided by the Parties, use of the precautionary approach, reporting by the Parties, progress towards achieving the international goals for sea lice and containment in aquaculture, introductions and transfers and transgenics, observer programs, *Gyrodactylus salaris* and issues and advice of ICES and WGNAS.

More specifically, NASCO should ensure that the precautionary approach is used across all impacts of human activity on the full life-cycle of salmon in rivers, estuaries, coastal areas and the open ocean. NASCO should also ensure that the WSSD-JPOI commitment to maintain or restore stocks to levels that can produce the maximum sustainable yield by 2015 is met.

Sea mortality in coastal areas and estuaries should be covered to the same extent as high seas. ICES WGNAS should heed the advice given by the ICES Review Group to estimate post-smolt survival. The issues and recommendations raised by WGNAS in 2011 should also be addressed in 2012. Information in the river database should be compared with the annual ICES advice and habitat estimates.

In future reporting, information should be provided by the Parties on the interplay between stock conservation needs and incorporation of social and economic factors in decision-making, for both single and mixed-stock fisheries. All Parties should report on issues relating to the management of salmon fisheries in a prompt and timely fashion. Further progress is needed in management, including in the protection and preservation of salmon habitat.

To create a balance between measures aimed at ending mixed stock fisheries in areas beyond fisheries jurisdiction and measures ending mixed stock fisheries within areas of fisheries jurisdiction, NASCO should aim at closing the remaining mixed-stock fisheries in the North Atlantic. Observer programs on and screening of landings of pelagic vessels fishing in seasons and areas where salmon have feeding migrations should be continued.

Although NASCO has consolidated its agreements and guidance relating to aquaculture, introductions and transfers and transgenics through the Williamsburg Resolution and the BMP Guidance, additional progress is needed towards achieving the international goals for sea lice and containment in aquaculture, introductions and transfers and transgenics. Reporting on these issues should be made in a full and timely fashion. Further efforts are also needed to address *Gyrodactylus salaris*.

Chapter 6 – Compliance and Enforcement

NASCO is encouraged through the 'Next Steps' process to continue efforts to improve compliance and enforcement and promote the conservation, restoration, enhancement and rational management of salmon stocks.

To address illegal and unreported fishing within areas of fisheries jurisdiction, the Panel encourages a technical meeting to exchange information and best practices on the methods used to calculate unreported catches. The development of best practices and consolidated guidelines could also be considered. Timely reporting on estimates of unreported catches and measures taken to reduce such catches is essential.

NASCO should consider enhancing its current surveillance efforts by requesting the cooperation of NEAFC and NAFO in reporting on any suspected IUU salmon fishing activities in the area of the Convention that may be detected in their MCS operations.

Chapter 7 – Decision-making and Dispute Settlement

A review of the role and decision-making functions of the Council is recommended in light of the apparent need for binding decisions to be made by NASCO in all areas of focus.

NASCO should consider the best practices in other RFMOs on decision-making processes, including the need for a binding and compulsory dispute settlement mechanism, particularly if salmon stocks recover and regulatory measures on the allocation of fishing opportunities become necessary.

Chapter 8 – International Cooperation

Although NASCO's performance on this element is sound, recommendations have been made to enhance transparency, public relations and relationships with non-Parties.

NASCO should consider holding further stakeholder dialogue meetings in the jurisdictions of all relevant Parties. The NASCO website should show active NGOs, or explain why an NGO may be “suspended”.

With regard to public relations, NASCO should take further steps to consider, develop and implement a clear public relations strategy. The Public Relations Group could build on existing work and develop a medium-term proactive communications strategy that sets out objectives, tasks and the responsibilities of NASCO and its partners.

NASCO could consider its relationships with non-Parties in relation to action to address and deter the undermining of the objective of the Convention. Iceland should be encouraged to re-accede to the Convention and dialogue with St. Pierre and Miquelon should be increased in order to agree upon targets and a method for making decisions on its salmon fishery and also to improve data collection.

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LIST OF ACRONYMS

ACOM	ICES Advisory Committee
BMP Guidance	Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks
CLs	Conservation limits
Convention	Convention for the Conservation of Salmon in the North Atlantic Ocean
Decision Structure	Decision Structure to aid the Council and Commissions and the Relevant Authorities in Implementing the Precautionary Approach to Management of North Atlantic Salmon Fisheries
DOALOS	Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations
EAF	Ecosystem approach to fisheries
EEZ	Exclusive economic zone
EIFAAC	European Inland Fisheries and Aquaculture Advisory Commission
FAO	Food and Agriculture Organization of the United Nations
FAR	Focus area report
GFCM	General Fisheries Commission for the Mediterranean
IASRB	International Atlantic Salmon Research Board
IBSFC	International Baltic Sea Fishery Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
IP	Implementation plan
IPOA	International Plan of Action
IPOA-Capacity	International Plan of Action for the Management of Fishing Capacity
IPOA-IUU	International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
IPOA-Seabirds	International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries
IPOA-Sharks	International Plan of Action For the Conservation and Management of Sharks
ISFA/NASCO Liaison Group	International Salmon Farmers Association
IUU fishing	Illegal, unreported and unregulated fishing
MCS	Monitoring, control and surveillance

MSW	Multi-sea winter
MSY	Maximum sustainable yield
MTs	Management targets
NAC	North American Commission
NAFO	Northwest Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammal Commission
NARFMOs	North Atlantic Regional Fishery Management Organizations
NASCO	North Atlantic Salmon Conservation Organization
NASF	North Atlantic Salmon Fund
NEAC	North-East Atlantic Commission
NEAFC	North East Atlantic Fisheries Commission
'Next Steps' Review	
Group	'Next Steps' for NASCO Review Group
1992 Resolution	1992 Resolution on Fishing for Salmon on the High Seas
NGO	Non-governmental organization
NPAFC	North Pacific Anadromous Fisheries Commission
1SW	One-sea winter
OSPAR Commission	Commission established under the Convention for the Protection of the Marine Environment of the North-East Atlantic
PSC	Pacific Salmon Commission
RFMOs	Regional fisheries management organization and arrangements
RSN	Regional Fishery Bodies Secretariats Network
SAG	Scientific Advisory Group
SALSEA Programme	Salmon at Sea Programme
SOFIA	State of World Fisheries and Aquaculture Report
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
WECAFC	Western and Central Atlantic Fisheries Commission
WGC	West Greenland Commission
WGNAS	Working Group on North Atlantic Salmon
WSSD-JPOI	Johannesburg Declaration on Sustainable Development and Plan of Implementation of the World Summit on Sustainable Development

1. INTRODUCTION

The North Atlantic Salmon Conservation Organization (NASCO) was established in 1984 in response to the need for an international forum for international cooperation on salmon in the North Atlantic Ocean. As provided in the Convention for the Conservation of Salmon in the North Atlantic Ocean (the Convention), the objective of the Organization has been to contribute through consultation and cooperation to the conservation, restoration, enhancement and rational management of salmon stocks, taking into account the best scientific evidence available to it.¹

Since it was established, NASCO has introduced significant changes in the management of salmon fisheries in the North Atlantic, particularly in light of the reduced abundance of salmon, including major reductions in quotas and effort and closure of some fisheries. While considerable sacrifices have been made in commercial, recreational and subsistence fisheries, many stocks remain well below their conservation limits.

1.2 Background of the External Performance Review

Commencing in 2004, NASCO undertook a comprehensive and critical review of its work called the 'Next Steps' for NASCO. The process aimed to: identify the challenges facing the Organization in the management and conservation of wild Atlantic salmon and ways to address these challenges; review the management and organizational structure of NASCO; and consider the procedural aspects of NASCO and the relationship between the Organization, the Parties and stakeholders.²

At the same time, the international community was becoming increasingly concerned over the status of fish stocks and the work of regional fisheries management organizations and arrangements (RFMOs). In 2006, the United Nations General Assembly adopted resolution 61/105, which contained specific recommendations to urge further efforts by RFMOs to strengthen and modernize their mandates and measures adopted to implement modern approaches to fisheries management; urge RFMOs to improve transparency and ensure that their decision-making processes were fair and transparent, rely on the best scientific information available and incorporate the precautionary and ecosystem approaches; and urge States, through their participation in RFMOs, to undertake performance reviews of those RFMOs using transparent criteria.³

1.3 Terms of reference and criteria of the NASCO Performance Review

In 2010 and 2011, the NASCO Council decided to undertake an external performance review with the purpose of assessing the performance of NASCO since its establishment against the objectives set out in the Convention and other relevant international instruments addressing the conservation and management of aquatic living resources, and taking into account the NASCO 'Next Steps' process, resolution 61/105 and other subsequent resolutions on sustainable fisheries, and certain criteria (Appendix I).

¹ Article 3.

² CNL(11)44.

³ Resolution 61/105 of 8 December 2006, paras. 70, 72-73.

as appropriate.⁴

1.4 The External Performance Review Panel

The Council agreed that the performance review would be undertaken by a Panel comprised of three internationally recognised experts from the Food and Agriculture Organization of the United Nations (FAO), and the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations (DOALOS), together with a fisheries scientist with management experience, appointed by the Council at its twenty-eighth annual meeting. It further agreed that the Parties, accredited non-governmental organizations (NGOs) and the NASCO Secretariat would not serve on the Panel, but that that Secretariat would provide logistical support. The report of the Panel would be circulated to the Parties and accredited NGOs prior to the twenty-ninth annual meeting of NASCO. The report of the performance review would also be presented by a member of the Panel.

Following consultations, it was decided that the Panel would be comprised of:

1. Mr. Kjartan Hoydal, former Secretary of the North East Atlantic Fisheries Commission (NEAFC);
2. Mr. Michael Shewchuk, Legal Officer, DOALOS; and
3. Ms. Judith Swan, nominated by FAO.

The Panel met at NASCO Headquarters in Edinburgh, United Kingdom during the week of 30 January 2012. All subsequent tasks were conducted by correspondence.

1.5 Structure of the report

The report consists of nine sections, with the first two sections providing the Introduction and Background and History of NASCO. The third section considers the 'Next Steps' Process. The fourth section reviews the Convention against modern fisheries instruments and includes an indicative framework for provisions in an updated instrument.

The remaining five sections review the performance of NASCO against the criteria annexed to the Terms of Reference (Appendix I).

2. BACKGROUND AND HISTORY

2.1 Brief history of NASCO

Prior to the 1960s, the exploitation of salmon in the North Atlantic was carried out at a national level. In 1969, NEAFC recommended a full ban on salmon fisheries outside national fisheries limits. With the extension of the exclusive economic zones (EEZs) in the North Atlantic, the 1959 NEAFC Convention became obsolete and the subsequent development of fisheries at West Greenland and in the Northern Norwegian Sea meant that rational management could only be achieved through international cooperation.

⁴ CNL(11)44.

The Convention for the Conservation of Salmon in the North Atlantic Ocean entered into force on 1 October 1983 and in 1984 created an inter-governmental organization, the North Atlantic Salmon Conservation Organization, with the objective of conserving, restoring, enhancing and rationally managing wild Atlantic salmon.

The Convention created a large protected zone, free of targeted fisheries for Atlantic salmon in most areas beyond 12 nautical miles from the coast. One immediate effect of the entry into force of the Convention was the cessation of the salmon fishery in the Northern Norwegian Sea, which at its peak in 1970 harvested almost 1,000 tonnes of salmon.

In the late 1980s and early 1990s, NASCO acted through diplomatic initiatives to address fishing for salmon in international waters by vessels registered to non-Parties. There have been no reports of such activities since the early 1990s.

While NASCO's initial focus was very much on developing management measures for the distant-water fisheries at West Greenland and the Faroe Islands, it has been widely accepted that conservation and restoration of salmon stocks cannot be achieved by such measures alone. NASCO has considerably broadened its base and now addresses a wide range of issues, including management of salmon fisheries by States of origin, habitat protection and restoration and aquaculture and related activities.

2.2 Objective and mandate

The objective for the Organization is set out in article 3 of the Convention:

"The objective of the Organization shall be to contribute through consultation and co-operation to the conservation, restoration, enhancement and rational management of salmon stocks subject to this Convention, taking into account the best scientific evidence available to it."

The area of the Convention is the Atlantic Ocean north of 36° N latitude, throughout the migratory range of the Atlantic salmon. There is no northern boundary provided in the Convention. The Convention covers only one species (*Salmo salar* L.), but probably more than 2500 separate stocks, based on the estimated number of salmon rivers.

In terms of fisheries, the Convention refers to the following:

- Fishing of salmon beyond areas of fisheries jurisdiction of coastal States;
- Fishing of salmon within areas of fisheries jurisdiction of coastal States, beyond 12 nautical miles from the baselines from which the breadth of the territorial sea is measured;
- Fishing in the West Greenland Commission area, up to 40 nautical miles from the baselines;
- Fishing in the North East Atlantic Commission area, within the area of fisheries jurisdiction of the Faroe Islands;
- Salmon harvests within the area of fisheries jurisdiction of a Party (stating explicitly that no recommendation shall be made concerning their management); and

- Activities of the vessels of a State not a Party to the Convention.

Articles 7 and 8 of the Convention also refer to:

- Fisheries in the area of the North American Commission (NAC) the West Greenland Commission (WGC) and the North-East Atlantic Commission (NEAC);
- Catches in the area of fisheries jurisdiction of one member of salmon originating in the rivers of another Party; and
- Fishing patterns in salmon fisheries in the North American Commission area.

In light of the objective of the Organization as set out in article 3, which refers to the conservation, restoration, enhancement and rational management of salmon stocks subject to the Convention, the Parties should cooperate throughout the life cycle of the salmon, including concerning the following habitats:

- rivers;
- spawning grounds (ova and alevins);
- feeding grounds for fry and parr;
- estuaries and coastal waters; and
- the open ocean.

A further consequence of the objective of the Organization is that NASCO has to consider other activities with a significant impact on the environmental status of these habitats of concern. In the rivers of the Parties, one of the main concerns has been dam building and the barring of access for salmon to spawning grounds. Other impacts of concern include aquaculture, introductions and transfers and transgenics.

NASCO is in the process of formalizing cooperation with the Commission established under the Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR Commission, see section 8), the mechanism by which fifteen Governments of the western coasts and catchments of Europe, together with the European Community, cooperate to protect the marine environment of the North-East Atlantic. In its 2010 Quality Status Report, OSPAR included the following activities affecting coastal and oceanic waters in the North East Atlantic:

- climate change;
- eutrophication;
- hazardous substances;
- radioactive substances;
- offshore oil and gas industry;
- the use of living marine resources, including fisheries and mariculture; and
- other human uses and impacts including coastal developments and offshore windfarms.

2.3 Structure of the Organization

Only Governments are members of NASCO, which has six Parties: Canada, Denmark (in respect of the Faroe Islands & Greenland), the European Union, Norway, the Russian Federation and the United States of America. Iceland withdrew from NASCO with effect from 31 December 2009 due to financial considerations, but has indicated that it intends to re-accede to the Convention when the economic situation improves. France, representing St. Pierre and Miquelon, has been invited to join NASCO, but has preferred to be an observer.

NASCO also has 35 accredited NGOs, including industry groups.

The Convention-based bodies of NASCO are described below.

2.3.1 The Council

The Council, which consists of representatives of all Contracting Parties, *inter alia*, provides a forum for consultation and cooperation and for the study, analysis and exchange of information on salmon stocks subject to the Convention. It facilitates coordination of the activities of the regional Commissions, makes recommendations concerning the undertaking of scientific research, supervises and coordinates the administrative, financial and other internal affairs of the Organization, establishes working arrangements with the International Council for the Exploration of the Sea (ICES) or other appropriate fisheries and scientific organizations; and coordinates the external relations of the Organization (see article 4 of the Convention).

2.3.2 The NASCO Commissions

The three Commissions, described below, generally provide fora for consultation and cooperation, propose regulatory measures for fishing in the area of fisheries jurisdiction of a member of salmon originating in the rivers of other Parties and make recommendations on the undertaking of scientific research (see articles 7 and 8 of the Convention). However, the North American Commission has a more detailed mandate.

The North American Commission

The members of the NAC are Canada and the United States of America. In addition, the European Union has the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in its territory.

The North-East Atlantic Commission

The members of the NEAC are Denmark (in respect of the Faroe Islands and Greenland), the European Union, Norway and the Russian Federation. In addition, Canada and the United States of America have the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in their rivers and occurring off East Greenland.

The West Greenland Commission

The members of WGC are Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union and the United States of America.

The areas of the three Commissions are outlined below.



Figure 1: NASCO Commission Areas

There are also two subsidiary bodies: The Finance and Administration Committee and the Standing Scientific Committee. The Finance and Administration Committee operates according to the Financial Rules of NASCO.⁵ The Standing Scientific Committee develops the requests to ICES for scientific advice.

2.3.3 The Secretariat

The Secretariat is based in Edinburgh, United Kingdom and the Secretary's functions include providing administrative services, compiling and disseminating statistics and reports concerning salmon stocks, and such other functions as follow from the provisions of the Convention.

2.3.4 International Atlantic Salmon Research Board

In 2001, NASCO established an International Atlantic Salmon Research Board (IASRB) to promote collaboration and cooperation on research into the causes of marine mortality of Atlantic salmon and the opportunities to counteract this mortality. Each NASCO Party is a founding member of the Board, which also includes representation from NASCO's affiliated NGOs. The Board maintains an inventory of research projects, identifies research gaps and needs, funds approved projects and provides a forum for co-ordination of research efforts. A Scientific Advisory Group identifies research needs and priorities, makes recommendations for enhanced co-ordination of existing research, and evaluates and advises the Board on proposals for research.

⁵ http://www.nasco.int/pdf/agreements/financial_rules.pdf

The Board has developed and implemented, through a public-private partnership, an innovative and comprehensive programme of marine research - the SALSEA Programme. The Programme, a major, innovative programme of research, was developed in 2005 to respond to declining abundance of salmon due to poor survival at sea. The IASRB has its own financial rules outside the main budget of NASCO.

3. NASCO 'NEXT STEPS' PROCESS

3.1 Introduction

To mark its twentieth anniversary, NASCO initiated the 'Next Steps' for NASCO to: identify the challenges faced by the Organization in the management and conservation of wild Atlantic salmon and ways to address these challenges; review the management and organizational structure of NASCO; and consider the procedural aspects of NASCO and the relationship between the Organization, its Parties and stakeholders.

The work was conducted by a Working Group comprised of representatives of the Parties and NASCO's accredited NGOs and involved consultations open to stakeholder in Europe and North America. In light of the findings of the Working Group,⁶ in 2005 the Council adopted a Strategic Approach for NASCO's Next Steps.⁷

The Strategic Approach set out a vision for NASCO to "*pursue the restoration of abundant Atlantic salmon stocks throughout the species' range with the aim of providing the greatest possible benefits to society and individuals*". In order to achieve this vision, NASCO would: (a) be committed to the measures and agreements it develops and actively review progress with implementation plans; (b) increase its effectiveness and efficiency by ensuring that it uses the best available knowledge to inform its actions and by actively seeking to identify and respond to new opportunities and threats; (c) ensure transparency in its operations and enhance the use of NGO and stakeholder knowledge and experience; and (d) increase its visibility and raise its profile in international, national and local communities by developing its communications and public relations activities.

The Strategic Approach also identified seven key challenges in the management and conservation of wild Atlantic salmon, as well as goals and key issues in relation to these challenges: (i) management of salmon fisheries, (ii) social and economic aspects of Atlantic salmon, (iii) research on salmon at sea (including studies of by-catch of salmon), (iv) protection and restoration of Atlantic salmon habitat, (v) aquaculture, introductions and transfers and transgenics, (vi) *Gyrodactylus salaris*, and (vii) initiatives for endangered salmon populations.

In addition, it contained a wide range of decisions that were taken by the Council in three main areas: implementation, commitment and accountability; transparency and inclusivity; and raising NASCO's profile. Some of these decisions were adopted immediately, while

⁶ CNL(05)14.

⁷ CNL(05)49.

others were implemented during the course of a multi-year programme, which was completed in 2011.

3.2 Implementation, commitment and accountability

In order to improve commitment and accountability, each Party was requested to submit an implementation plan (IP) by 2007 detailing the measures to be taken over a five year period in relation to management of salmon fisheries, habitat protection and restoration, minimising the adverse impacts of aquaculture, introductions and transfers and transgenics, and other factors. Progress in implementing these measures was reported by the Parties through annual progress reports on all topic areas. Detailed focus area reports (FARs) provided a more in-depth assessment of actions taken under one of the topic areas and provided the basis for review of management actions within each jurisdiction to meet the objectives of the IP and their efficacy in addressing the overall objectives of NASCO.⁸

The IPs and FARs were reviewed by ad hoc groups comprised of representatives of the Parties, the Standing Scientific Committee and stakeholders. Most, but not all, jurisdictions submitted both IPs and FARs. Some FARs were submitted too late to be reviewed.

For all three focus area reviews, the FAR Review Groups found that, while some progress had been made, additional actions were needed by the Parties to ensure consistency with NASCO's agreements and guidelines. For example, with regard to:

- *the management of salmon fisheries*, additional progress was needed on establishing conservation limits and on the management of mixed-stock fisheries;
- *habitat protection and restoration*, there was a need for the Parties to develop comprehensive habitat plans and to clarify how the burden of proof was placed on proponents of activities that could impact wild salmon;
- *aquaculture*, there was a need for adequate controls on fish movements, adequate development and implementation of containment action plans and additional information to demonstrate progress towards the international goals for sea lice and containment.

In summary, the FAR Review Groups found that additional actions were required for:

- 11 out of 12 jurisdictions in relation to management of salmon fisheries;
- 9 out of 13 jurisdictions with regard to habitat protection and restoration; and
- 12 out of 14 jurisdictions (and all jurisdictions with salmon farming) in relation to aquaculture and related activities.

The FAR Review Groups also decided that additional guidance should be developed to assist the Parties in making further progress in implementing NASCO's agreements and guidelines, to provide a basis for future exchange of information and to assist with future reporting. The following new guidelines were developed, or reviewed, as part of this process:

⁸The reviews were conducted for fisheries management (2008), habitat protection and restoration (2009) and aquaculture and related activities (2010) (see CNL(08)13, CNL(09)12, CNL(10)11, CNL(10)12, and CNL(11)11).

- Guidelines for the Management of Salmon Fisheries;⁹
- Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat;¹⁰ and
- Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks.¹¹

3.3 Transparency and inclusivity

The conditions governing the participation of NGOs have been modified over the years to allow for greatly increased involvement in NASCO's work.

As a result of the 'Next Steps' process, further measures were taken to improve transparency and inclusivity in the Organization. Prior to the review, NGOs could attend all meetings of the Council and Commissions, receive all documents for these meetings and make opening statements. Following the adoption of the Strategic Approach, it was decided that NGOs could also participate in discussions on all Council and Commission agenda items before and after interventions made by the Parties (other than finance and administrative matters) and participate in all meetings, including serving on review bodies.

3.4 Raising NASCO's profile

Following the adoption of the Strategic Approach, efforts were also made to enhance NASCO's profile and improve understanding of the work of the Organization, including through the establishment of a Public Relations Working Group, the development of a database of educational programmes, the enhancement of the NASCO website and the development of a database of salmon rivers. A proposal for an annual state of the salmon report has not been implemented to date.

3.5 Measuring progress and the next cycle of reporting

In 2010, the Council established a review group, made up of representatives of the Parties and accredited NGOs, to review the 'Next Steps' process, review the process used for reporting and evaluation, and identify any additional areas that might need to be addressed, among other actions.¹²

The 'Next Steps' for NASCO Review Group ('Next Steps' Review Group) recognized that progress had been made in adopting and implementing the Strategic Approach, although there were different views on the extent of its implementation.¹³ In addition, major improvements had been made to improve transparency and inclusivity and commitment to NASCO's agreements and guidelines. The first cycle of reporting had also created a sound

⁹CNL(09)43.

¹⁰CNL(10)51.

¹¹SLG(09)5.

¹²CNL(11)(12).

¹³CNL(11)(12).

basis for assessing measures that had been taken by the Parties in accordance with NASCO's agreements and guidelines and highlighted where additional actions were needed. In addition, it had led to a valuable exchange of information among the Parties.

Despite progress, however, the 'Next Steps' Review Group recognized that: (i) many of the key issues identified in the Strategic Approach related to process and not to outcomes, which it agreed should be the ultimate objective; (ii) the focus of reporting by the Parties had been on the measures taken and not on the effectiveness of those measures; and (iii) in some areas, such as socio-economics, further work was needed. It was agreed that the next cycle should focus on changes since the last reporting, measurable progress towards agreed objectives and furthering information exchange. The 'Next Steps' Review Group stressed the need for greater emphasis on monitoring and evaluation of activities in the IPs, with clearly described identifiable, measurable outcomes and timescales.

In 2011, a working group for future reporting and evaluation developed a template to assist Parties in the development of implementation plans, guidelines for the preparation and evaluation of implementation plans and for reporting on progress, and a template for annual progress reports.¹⁴ The working group recommended that the IPs and the annual progress reports should be subject to a critical evaluation process and that a new cycle of FARs should be developed around specific themes and presented during special sessions.

A number of topics for the focus of the special sessions were also proposed, including management of mixed-stock fisheries, managing salmon under a changing climate, and fish passage at hydro-electric facilities. In terms of timing, it was recommended that the next cycle of reporting should commence with the preparation and review of implementation plans in 2012/2013, covering the period 2013-2018.

Analysis

Through the 'Next Steps' process, NASCO has succeeded in undertaking a comprehensive and critical review of the work of the Organization to date. The challenges facing the Organization have been identified and decisions have been taken on how to address these challenges, including through the identification of goals and key issues.

The Strategic Approach has provided a comprehensive framework for improvements to be made by the Parties in the work of the Organization. It has led the Organization to focus on three principal areas that are critical to the recovery of salmon stocks, namely, management of salmon fisheries, habitat protection and restoration, and aquaculture, introductions and transfers and transgenics. Importantly, new guidelines have been developed on these three areas to develop best practices and to address ambiguities or inconsistencies in the NASCO agreements and guidelines.

The new reporting and review procedures, in particular, have led to improvements in implementation, commitment and accountability. Although problems with duplication and failures in reporting have been noted, the process of preparing IPs and FARs has stimulated

¹⁴WGFR(11)8, Annex 5.

the development of management approaches consistent with NASCO's agreements and guidelines, as well as improved coordination and exchange of information on best practices. The reporting developed during the first cycle will be critical in measuring progress in the actions taken by the Parties to improve the conservation, restoration, enhancement or rational management of salmon stocks during subsequent cycles.

Concerning transparency and inclusivity, the 'Next Steps' process has facilitated a more transparent and meaningful exchange of information between the Parties, as well as greater NGO involvement, consistent with modern fisheries instruments. Notably, the IPs and FARs developed during the 'Next Steps' process have been made available on the NASCO website.

While this progress is to be encouraged, it will be important for NASCO to continue the 'Next Steps' process and make further improvements on the implementation of NASCO's agreements and guidelines, including the Strategic Approach. A number of areas have been identified by the 'Next Steps' Review Group where further progress can be made.¹⁵

During the next reporting cycle, it will also be important for the Parties to focus on assessing the effectiveness of the measures taken, with more emphasis on monitoring and evaluation of activities. To this end, the IPs should contain clearly described identifiable, measurable outcomes and timescales, as recommended. FARs on specific themes will help to encourage a more in-depth consideration of issues where further progress is needed, or where new challenges have been identified.

It would be particularly useful for the next reporting cycle to take up the areas for additional action that were identified by the FAR Review Groups during the first cycle. These areas could be considered in the IPs under "threats and challenges" and "actions" as proposed,¹⁶ or they could be considered separately in the IPs, for additional focus. Progress in this regard could also be the subject of a theme-based FAR special session.

Consideration should also be given to how to address failures in reporting. The Parties should be encouraged to report in a timely fashion, even if only to confirm that requested information is not relevant or that new actions have not been taken since the filing of previous reports. The possibility of electronic filing could also be considered.

While it will be important for the 'Next Steps' process to continue to focus on the three main theme areas of the Organization, consideration could also be given to making progress on the social and economic aspects of Atlantic salmon and on initiatives for endangered populations. It is noted that a special session is planned on how socio-economic factors are being incorporated in management decisions and to consider the utility of the NASCO guidelines and the future approach to be taken by NASCO. In the long-term, the 'Next Steps' process should be flexible enough to allow for consideration of additional cross-cutting issues.

The Panel recognizes the sensitivities around proposals to amend the Convention and appreciates that the 'Next Steps' process has been developed, in part, as an alternative to

¹⁵See CNL(11)12, Annex 3.

¹⁶WGFR(11)8, Annex 3.

taking such action. However, the Panel does not view these approaches as mutually exclusive, but rather as complementary. The 'Next Steps' process affords an opportunity for the Organization to consider a review of the functions and role of the Council including, for example, the possibility of vesting it with binding decision-making authority (see section 4).

Recommendations

1. The 'Next Steps' process has succeeded in undertaking a comprehensive and critical review of the work of the Organization to date and in enhancing efforts on the current areas of focus of the Organization. This progress should continue, based on the Strategic Approach, which has provided a comprehensive framework for the work to be undertaken and for improvements to be made in the implementation of NASCO Agreements.

2. In the next reporting cycle, the Parties should continue their efforts to implement the decisions and to address the issues identified in the Strategic Approach. It will be important for the second cycle to address areas identified in the first cycle of the 'Next Steps' process for additional action. Consideration should be given to convening an FAR special session on this topic. Progress on the socio-economic aspects of Atlantic salmon and initiatives for endangered populations is also encouraged.

3. In terms of reporting, the next cycle should focus on assessing the effectiveness of the measures taken by the Parties. The IPs should contain clearly described identifiable, measurable outcomes and timescales. The Parties are encouraged to prepare IPs and FARs in a timely fashion, including through the possibility of electronic filing.

4. In the long-term, the 'Next Steps' process should consider cross-cutting issues, such as climate change. It should also consider conducting a review of the functions and role of the Council including the possibility of vesting it with binding decision-making authority.

4. CONVENTION ON THE CONSERVATION OF SALMON IN THE NORTH ATLANTIC OCEAN

4.1 Introduction

The Convention was prepared and open for signature in 1982, prior to the adoption and signature of the 1982 United Nations Convention on the Law of the Sea (UNCLOS). With the rapidly growing number of States establishing jurisdiction over fisheries up to 200 nautical miles a new, and cooperative, approach towards fisheries management was required. The need was emerging for an international convention to protect Atlantic salmon that would: ban fishing beyond 12 miles; provide for cooperation among all countries on salmon

conservation, regulation and enforcement; and provide a forum for international cooperation on research and exchange of data.¹⁷

Such a convention would have to be based on UNCLOS; in particular article 66 on “Anadromous stocks”. Its key provisions required consultations and cooperation between States of origin and other States, as summarized below.

- States in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks.
- The State of origin of anadromous stocks shall ensure their conservation by the establishment of appropriate regulatory measures for fishing in all waters landward of the outer limits of its EEZ. The State of origin may, after consultations with other relevant States, establish total allowable catches for stocks originating in its rivers.
- Fisheries for anadromous stocks shall be conducted only in waters landward of the outer limits of EEZs.
- With respect to fishing beyond the outer limits of the EEZ, the States concerned shall maintain consultations with a view to achieving agreement on terms and conditions of such fishing.
- Enforcement of regulations regarding anadromous stocks beyond the EEZ shall be by agreement between the State of origin and the other States concerned.
- Where anadromous stocks migrate into or through the waters landward of the outer limits of the EEZ of a State other than the State of origin, such a State shall co-operate with the State of origin with regard to the conservation and management of such stocks.
- The State of origin of anadromous stocks and other States fishing these stocks shall make arrangements for the implementation of the provisions of this article, where appropriate, through regional organizations.

Other provisions of UNCLOS also had a bearing on salmon stocks, in particular article 61 on “Conservation of the living resources”. It required, *inter alia*, the coastal State:

“...taking into account the best scientific evidence available to it, to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall co-operate to this end.”

¹⁷All of these objectives were expressed in the 1978 Resolution of the Second International Atlantic Salmon Symposium held in Edinburgh, United Kingdom.

Importantly, the measures must aim towards maintaining or restoring harvested species at levels that can produce the maximum sustainable yield “as qualified by relevant environmental and economic factors ... and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.”

Subsequent international fisheries instruments have built upon UNCLOS and the outcomes of the 1992 United Nations Conference on Environment and Development (UNCED), including Agenda 21, which provided a blueprint for the management of the environment. These “post-UNCED fisheries instruments”, as described below in section 4.2, progressively:

- elaborated principles and approaches that are relevant to the conservation and management of anadromous species;
- expanded international law for high seas fishing;
- formed a basis for strengthened cooperation among coastal and fishing States in respect of stocks of common interest;
- addressed responsible fisheries and illegal, unreported and unregulated (IUU) fishing;
- provided international guidelines including those in relation to by-catch and discards; and
- through annual United Nations General Assembly resolutions, reflected at the international level relevant developments, goals, laws and practice.

This body of fisheries instruments includes those that are legally binding and others that are non-binding and serve as a guide for fisheries conservation and management. In this regard, these instruments have also contributed to the development or revision of the conventions or other constitutive instruments of RFMOs, as well as the development of best practices at regional and national levels.

These fisheries instruments were developed in parallel with, and are complementary to, broader international initiatives and agreements on the environment, including the marine environment, such as the 1992 Convention on Biological Diversity and the 2002 Johannesburg Declaration on Sustainable Development and Plan of Implementation of the World Summit on Sustainable Development (WSSD-JPOI). The latter endeavoured to stimulate and reinvigorate the implementation of Agenda 21 in a more concrete manner to achieve clear results.

Because these instruments were elaborated after the conclusion of the NASCO Convention, the latter does not reflect many of the principles, provisions and guidelines in those instruments. Key areas in these instruments that are not addressed in the Convention, but may be considered for inclusion as appropriate are explained in section 4.3 below.

Importantly, although not legally obligated to do so under the Convention, NASCO has in practice considered and implemented various provisions, principles and approaches that appear in the post-UNCED instruments through its resolutions, guidelines, action plans, protocols, explanatory notes and other decisions, as discussed below.

4.2 Relevant International Post-UNCED Fisheries Instruments

4.2.1 Legally binding international fisheries instruments

Ratification by the NASCO Parties of relevant binding international fisheries instruments is shown in Table 1. The only instrument not in force is the FAO Port State Measures Agreement,¹⁸ although it has been signed or ratified by four of the NASCO Parties. All NASCO Parties except the United States are party to UNCLOS, but the United States recognizes UNCLOS as reflective of customary international law and it has implemented many fisheries-related provisions of UNCLOS. All NASCO Parties are party to the United Nations Fish Stocks Agreement.¹⁹

Table 1: Parties to International Fisheries Instruments

	Canada	Greenland and Faroe Islands through Denmark	European Union	Norway	Russian Federation	USA
UNCLOS						
FAO Compliance Agreement						
United Nations Fish Stocks Agreement						
Port State Measures Agreement	Signed		Ratified	Ratified	Signed	

4.2.1.1 FAO Compliance Agreement²⁰

The 1993 FAO Compliance Agreement applies to high seas fishing and focuses on the duties of flag States to exercise effective jurisdiction and control over its fishing vessels, as well as

¹⁸ 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

¹⁹ 1995 United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of straddling Fish Stocks and Highly Migratory Stocks.

²⁰ 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.

the consequences of re-flagging that undermine fisheries conservation and management. It aims to ensure the adequate flow of information on high seas fisheries activities.

4.2.1.1.1 Implications for NASCO

In NASCO, the issue of re-flagging of Parties' vessels to non-Parties, in order to escape the requirements of the Organization, was an issue prior to the adoption of the Compliance Agreement. The issue was resolved in the early 1990s through a combination of actions, including demarches based on article 2.3 of the Convention, which requires Parties to invite the attention of non-Parties to the activities of their vessels that adversely affect the conservation, restoration, enhancement or rational management of salmon stocks.

In addition to demarches, in 1992 NASCO adopted a Protocol to address the re-flagging issue and encourage compliance with NASCO instruments by non-Parties. The objective of the Protocol Open for Signature by States Not Parties to the Convention for the Conservation of Salmon in the North Atlantic Ocean²¹ was to create a legal instrument for States which were unable to become Parties to the Convention. Its main objectives were to require non-Parties to prohibit the fishing of salmon stocks beyond areas of fisheries jurisdiction, take appropriate enforcement action and encourage the provision of information. While it was circulated, the Protocol was not signed by any non-Parties due to the success of the diplomatic actions.

NASCO also adopted a resolution in 1992 on Fishing for Salmon on the High Seas (the 1992 Resolution).²² Among other elements, it resolved that the Parties should discourage their nationals and prohibit vessels owned by their nationals from engaging in any activity contrary to the provisions of the Convention. It also requested the Secretary to obtain, compile and disseminate information provided by Parties concerning sightings of fishing activities on the high seas of the North Atlantic that may undermine the conservation measures adopted by NASCO.

NASCO Parties continue to take some actions to implement the 1992 Resolution, including through limited surveillance flights. However, the extent to which IUU fishing remains an issue is largely unknown (see section 6).

The requirements of the FAO Compliance Agreement have largely been superseded by the United Nations Fish Stocks Agreement.

4.2.1.2 United Nations Fish Stocks Agreement

The United Nations Fish Stocks Agreement was developed to elaborate provisions relating to high seas fishing for straddling fish stocks and highly migratory fish stocks in UNCLOS. The objective of the United Nations Fish Stocks Agreement is to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of UNCLOS.

²¹CNL(92)53.

²²CNL(92)54.

The United Nations Fish Stocks Agreement is focused on activities in the high seas, but certain provisions also apply to areas under national jurisdiction. These relate to general principles, the precautionary approach and developing compatible measures within and beyond areas of national jurisdiction. The duties of flag States are elaborated, including the duty to establish regulations ensuring that their vessels do not conduct unauthorized fishing within areas of national jurisdiction of other States.

The United Nations Fish Stocks Agreement (article 5) contains a list of twelve general principles for the conservation and management of fisheries on straddling and highly migratory fish stocks. The principles refer, inter alia, to biodiversity, ecosystems, by-catch and discards and monitoring, control and surveillance (MCS). These principles reinforce, in part, a preambular paragraph in the United Nations Fish Stocks Agreement on the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimize the risk of long-term irreversible effects of fishing operations and many of its provisions.

Among other things, the United Nations Fish Stocks Agreement also elaborates provisions on compatibility of measures within and beyond national jurisdiction, the precautionary approach to fisheries management, flag State duties, port State measures, compliance and enforcement, new members, non-members, transparency and recognition of the special requirements of developing States.

4.2.1.2.1 Implications for NASCO

The United Nations Fish Stocks Agreement does not have strict application to salmon stocks, which are anadromous and are not considered to be either highly migratory or straddling fish stocks. Many of the provisions of the United Nations Fish Stocks Agreement, such as boarding and inspection on the high seas, are also not relevant or have little practical utility to NASCO's operations. However, in a more general sense, the principles of the United Nations Fish Stocks Agreement and obligations to cooperate through RFMOs, which are also reflected in other international fisheries instruments, including the 1995 FAO Code of Conduct for Responsible Fisheries, form part of the best practices of RFMOs and national fisheries laws and are thus applicable to NASCO and its Parties.

The NASCO Convention does not generally incorporate the principles that are elaborated in the United Nations Fish Stocks Agreement. It does seek to avoid adverse effects by vessels of non-Parties in article 2.3, however. Where there is no reference to such principles in the Convention, the Organization has adopted many of them in its decisions and strategies.

For example, a focus on the precautionary approach is seen in the 1998 Agreement on Adoption of a Precautionary Approach,²³ the 1999 Action Plan for Application of a Precautionary Approach²⁴ and the 2005 Strategic Approach²⁵. Many of the principles also underlie the broader actions taken by the Organization in the context of the 'Next Steps' process. For example, the focus on habitat protection and restoration reflects an ecosystem

²³ CNL(98)46.

²⁴ CNL(99)48.

²⁵ CNL(05)49.

approach and management of stock diversity in NASCO's programme reflects biodiversity considerations.

Recommendation

1. Where they are not reflected, the relevant principles expressed in the United Nations Fish Stocks Agreement and other instruments, including the Code of Conduct, should be expressly adopted in NASCO's instruments and in the context of the 'Next Steps' process, and be considered for inclusion in potential revisions of the Convention.

4.2.1.3 Port State Measures Agreement

The Port State Measures Agreement aims to deter IUU fishing through establishing minimum standards and requirements for vessels to provide information prior to entry into port and for the port State to deny entry into port and use of port by a vessel where there is sufficient proof of or reasonable grounds to suspect IUU fishing. To this end, it also provides for inspections, reports of inspections, information sharing and training.

The Port State Measures Agreement integrates RFMOs in its provisions, including in the cooperation and exchange of information, denying the use of a port to a vessel on an IUU vessel list of an RFMO and requiring a flag State to confirm that catch was taken in accordance with measures of an RFMO. It encourages parties to agree on minimum levels of inspection through RFMOs. There are also notification requirements, including the requirement to notify RFMOs of the results of an inspection. The role of the flag State is also included, as well as the special requirements of developing States.

The Port State Measures Agreement will become binding when it is ratified by 25 countries.

4.2.1.3.1 Implications for NASCO

The Port State Measures Agreement has minimal relevance for most of NASCO's current areas of focus. However, if IUU fishing by vessels registered to non-Parties becomes an issue in the future, it could be a useful tool. In this respect, the Convention and the 1992 Resolution are not inconsistent with the Port State Measures Agreement and the Parties should be encouraged to become party to it.

It is recognized that some Parties already have obligations under the NEAFC scheme for port State control and EU Resolution 1005/2008 and some of the relevant rules are stricter than the Port State Measures Agreement.

Recommendations

2. If IUU fishing by vessels registered to non-Parties becomes an issue in the future, NASCO should consider taking measures consistent with the Port State Measures Agreement.
3. Any strategy would have to take account of the existing NEAFC port control system and EU Resolution 1005/2008.

4.2.2 Non-binding international fisheries instruments

4.2.2.1 1995 FAO Code of Conduct for Responsible Fisheries

The Code of Conduct is a voluntary instrument that provides guidelines for responsible fishing and aquaculture and forms the basis for a wide range of actions and measures of RFMOs. It is clearly interlinked with and complementary to other fisheries instruments, both voluntary and binding. The Code of Conduct is global in scope, and directed towards stakeholders that include RFMOs. It makes numerous references to the role of RFMOs in establishing a responsible international fisheries regime.

Some relevant provisions are:

- RFMOs are charged with collaborating in the implementation of the objectives and principles in the Code of Conduct;
- RFMOs should apply a precautionary approach to the conservation, management and exploitation of living aquatic resources;
- RFMOs have a role in attaining fisheries management objectives, providing a management framework and procedures, data gathering and management advice, application of the precautionary approach, describing management measures and implementation of the Code of Conduct itself.

The Code of Conduct, together with the technical guidelines, international plans of action and international guidelines that have been developed to elaborate its provisions, forms the basis for more extensive work in the following cross-cutting themes important at national²⁶ and regional levels, *inter alia*:

- Management of fish stocks and overfished stocks
- By-catch
- Aquaculture
- Ecosystems
- Scientific research and advice

²⁶ They form part of the United States' January, 2012 NOAA Fisheries Implementation Plan of the FAO Code of Conduct for Responsible Fisheries.

The provisions of the Code of Conduct are also considered in the development of international fisheries instruments.

4.2.2.1.1 Implications for NASCO

The Convention is consistent with the Code of Conduct, in terms of providing for scientific research and advice. The 2009 NASCO Guidelines for the Management of Salmon Fisheries²⁷ address management issues and is supported by activities to ensure implementation of best management practices in other areas such as habitat. Decisions and measures taken by NASCO are generally consistent with responsible actions in relation to by-catch, aquaculture, ecosystems and the United Nations Fisheries Agreements, without expressly being based on the Code of Conduct.

4.2.2.2 1999/2001 International Plans of Action (IPOAs) elaborated under the Code of Conduct

There are four voluntary IPOAs elaborated under the Code of Conduct. The first three were endorsed by the FAO COFI in 1999 and the last one was endorsed in 2001:

- Reducing Incidental Catch of Seabirds in Longline Fishing (IPOA-Seabirds)
- Conservation and Management of Sharks (IPOA-Sharks)
- Management of Fishing Capacity (IPOA-Capacity)
- Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)

Of all the IPOAs, the IPOA-IUU has the deepest focus on the role of RFMOs and encourages States and RFMOs to take actions or measures to combat IUU fishing and to implement the provisions of the other international fisheries instruments. It would be applicable to the NASCO salmon fisheries in its area of application, as complementary to measures already taken by the Organization, in particular the 1992 Resolution. The other three IPOAs are not currently applicable to activities under the Convention, although the IPOA-Seabirds would have had relevance in the past for longline salmon fisheries.

4.2.2.2.1 Implications for NASCO

The IPOA-IUU would have limited practical utility to NASCO's current priorities, given that the Organization's focal areas do not include high seas fishing. However, the Convention and related instruments, in particular the 1992 Resolution, are not inconsistent with the IPOA-IUU.

If NASCO were to decide to include high seas MCS as a focal area, an initial step would be to liaise with the existing operational capabilities of other RFMOs, such as NEAFC and the Northwest Atlantic Fisheries Organization (NAFO), which have already developed MCS capabilities. In that context, measures and actions encouraged by the IPOA-IUU could be

²⁷ CNL(09)43

useful in the development of any measures or comprehensive scheme by NASCO on compliance and enforcement to address IUU fishing activities in the future.

Recommendation

4. The need for measures or a mechanism to combat IUU fishing in the NASCO area of application should be monitored and as appropriate developed, including through cooperation with relevant RFMOs which already have in place MCS systems, in which case the IPOA-IUU should serve as a basis for such measures or mechanism.

4.2.2.3 2003 FAO Technical Guidelines on the ecosystem approach to fisheries

The purpose of the ecosystem approach to fisheries (EAF) management is presented in the Technical Guidelines:

The purpose of an ecosystem approach to fisheries is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystem.

From this purpose, the definition of EAF is as follows: *an ecosystem approach to fisheries strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries.*

The focus of the Technical Guidelines is on fisheries management, with some coverage of research, integration of fisheries into coastal area management and special requirements of developing countries. The need to prevent pollution from fishing activities and the impact of polluters on fishing is also included, but not fully elaborated.

The EAF is not seen as a replacement for, but rather an extension of, current fisheries management practices that need to be broadened to take into account the components of ecosystems in which fisheries operate.

4.2.2.3.1 Implications for NASCO

The Convention does not specifically refer to an EAF, but it is being operationalized by NASCO as appropriate as it has addressed challenges related to fisheries management, including habitat and aquaculture issues. Some other RFMOs are developing EAF management plans, and it could be useful for NASCO to consider whether such plans, as such, are needed.

Recommendation

5. Review the Technical Guidelines on the Ecosystem Approach to Fisheries with a view to determining whether EAF management plans are needed.

4.2.2.4 2010 FAO International Guidelines on By-catch Management and Reduction of Discards

The International Guidelines on By-catch Management and Reduction of Discards, a negotiated instrument, are to be interpreted and applied in conformity with the relevant rules of international law, as reflected in UNCLOS and to be applied to complement by-catch measures addressed in the IPOA-Seabirds and its related Best Practices to Reduce Incidental Catch of Seabirds in Capture Fisheries, the IPOA-Sharks and Guidelines to Reduce Sea Turtle Mortality in Fishing Operations.

The scope of the International Guidelines on By-catch Management and Reduction of Discards is global, covering all fishing activities in all seas, oceans and inland water. Their stated purpose is to assist States and RFMOs in implementing the Code of Conduct and an ecosystem approach to fisheries through effective management of by-catch and reduction of discards. The objective of these Guidelines is to promote responsible fisheries by:

- minimizing the capture and mortality of species and sizes that are not going to be used in a manner that is consistent with the Code of Conduct;
- providing guidance on measures that contribute towards more effective management of by-catch and reduction of discards; and
- improving reporting and the accounting of all components of the catch of which by-catch and discards are subsets.

4.2.2.4.1 Implications for NASCO

The NASCO Convention requires members of the NAC to take the measures necessary to minimize by-catches of salmon originating in the rivers of the other member with respect to its vessels and the area under its fisheries jurisdiction. The other Commissions do not have a similar obligation.

In past reports, ICES had raised concerns over the possible by-catch of salmon in fisheries for pelagic marine fish species in the North-East Atlantic. However, the degree to which by-catch of salmon may be occurring in pelagic fisheries remains unclear and past surveys have produced mixed results.

In the context of the NASCO 'Next Steps' process, the need for studies of by-catch of salmon in the NASCO's programme on research on salmon at sea was identified as a key challenge in the NASCO Strategic Approach. The goal for NASCO and its Parties was to promote

collaboration and cooperation on research into the causes of marine mortality of Atlantic salmon and the opportunities to counteract this mortality.

The 2009 Final Report of the Fisheries Management Focus Area Review Group²⁸ referred to the statement in the Agreement on Adoption of a Precautionary Approach that fisheries which could result in by-catch of salmon should be subject to cautious conservation and management measures. Obtaining such information is an additional challenge. A number of FARs referred to the possible by-catch of salmon in fisheries for other species and efforts to estimate them. During the 2011 Salmon Summit, screening of commercial pelagic catches and at processing plants was strongly recommended in order to detect by-catch.

By-catch is clearly an important issue for the Organization, and it would be useful to review the International Guidelines on By-catch Management and Reduction of Discards with a view to developing a strategy to promote their application by the Parties and by all Commissions, to the greatest extent possible, including in the development of by-catch management plans.

Recommendation

6. Review the International Guidelines on By-catch Management and Reduction of Discards with a view to developing a strategy to promote the application of by-catch measures in NASCO, including through all of its Commissions.

4.2.2.5 United Nations General Assembly annual resolutions on oceans and the law of the sea and on sustainable fisheries

The resolutions of the General Assembly on oceans and the law of the sea and on sustainable fisheries are adopted annually and constitute “soft law” instruments. The resolutions on sustainable fisheries, in particular, address a wide variety of fisheries issues and call upon States and RFMOs to consider specific actions or measures to achieve sustainable fisheries within their areas of competence. Importantly, they reflect consensus in the international community of priority issues or actions that should be taken, including the development of legally binding fisheries instruments.

The issues addressed in the sustainable fisheries resolution include: achieving sustainable fisheries; implementation of the United Nations Fish Stocks Agreement and other global fisheries instruments; IUU fishing; compliance and enforcement; by-catch and discards; sub-regional and regional cooperation; responsible fisheries in the marine ecosystem; and capacity-building. The resolutions also address issues relating to current areas of focus in NASCO, including aquaculture and habitat protection and they encourage the application of precautionary and ecosystem approaches.

²⁸CNL(09)11.

There has been no specific reference to salmon in the resolutions in recent years. Indirectly, the 2011 resolution on sustainable fisheries raised concerns over the potential effects of genetically engineered aquatic fish species on the health and sustainability of wild fish stocks and the need for guidance from the FAO on minimizing such harmful impacts.²⁹

The Panel's Terms of Reference noted that resolution 61/105 on sustainable fisheries was adopted during implementation of the recommendations in the Strategic Approach for NASCOs 'Next Steps'. It includes recommendations concerning the performance of RFMOs, such as strengthening and modernizing their mandates and measures, improving transparency and decision-making processes and undertaking performance reviews. The Council agreed that the Panel should take into account resolution 61/105 and identify any further actions that might be required in accordance with the relevant provisions of the resolution relating to RFMOs.

Through the 'Next Steps' process, NASCO has rapidly implemented major changes to further increase its transparency and inclusivity, consistent with resolution 61/105. Furthermore, NASCO has adopted the precautionary approach, and has either adapted its existing resolutions and agreements, or developed new ones, and has taken actions that are consistent with an ecosystem approach. In addition, the Terms of Reference for the performance review include an assessment of the performance of NASCO against the objectives set out in its Convention and other relevant international instruments addressing the conservation and management of aquatic living resources, including resolution 61/105.

4.2.2.5.1 Implications for NASCO

The Terms of Reference for the performance review meet the standards set in resolution 61/105. Otherwise, the Organization has adopted measures consistent with the need for RFMOs to improve transparency and decision-making processes, as provided in resolution 61/105. Further consideration could be given to strengthening and modernizing the mandate of NASCO and its bodies, as described below.

The Organization is encouraged to monitor applicable contents of the annual resolutions on sustainable fisheries.

4.3 Key Legal Issues in the Convention

4.3.1 Introduction

The objectives, goals and activities of NASCO have changed significantly since 1982 when the Convention was prepared and UNCLOS was signed.

²⁹ Resolution 66/68 of 6 December 2011, preamble and para. 21.

4.3.1.1 Evolution of international law and practice since the Convention was adopted

Although the main focus of the Organization remains North Atlantic Salmon, the Organization's activities have evolved over the years, reflecting to an extent, developments in international law and practice on the conservation and management of fish stocks, as reviewed above. However, the vision of the Convention thirty years ago was influenced by laws and conditions existing at the time, and there have been no revisions to address international legal developments or evolving circumstances. The general weaknesses in the Convention are described in detail below (see section 4.3.1.2).

The following factors provide a foundation for the expansion of the Organization's goals and activities over the years since the Convention was adopted:

- Entry into force of UNCLOS.
- Adoption and entry into force of other international fisheries instruments and their modern and broad-based approaches towards fisheries management and long-term sustainable use, as described in section 4.2.
- The change in priorities and values of the international community, from a narrower focus on scientific considerations to the adoption of integrated, precautionary and ecosystem approaches.
- Evolution in language on approaches to fisheries, for example, from "rational management" to "conservation and management measures".
- The development in international fora of commitments and recommendations to improve the performance of RFMOs and for the actions and the development of measures to improve the conservation and management of fish stocks.
- Best practices of RFMOs and modernization of mandates, *inter alia*, by clearly setting out modern principles and elements in their conventions not currently reflected in the NASCO Convention, such as:
 - a preamble reflecting the nature of the fishery and the will to address concerns through harmonized action and the application of modern principles;
 - a clear definition of terms;
 - long-term objectives that involve goals such as long-term sustainable use;
 - a mandate that goes beyond "consultation and cooperation"³⁰ and refers, for example, to the taking of measures;
 - principles upon which decisions and actions must be based;
 - responsibilities of parties in relation to implementing the convention;
 - responsibilities of non-parties;
 - actions that may be taken where measures are not being implemented or where there is no compliance either by parties or non-parties;
 - responsibilities of parties for implementation, including broad-based reporting and control of nationals beyond areas of national jurisdiction;
 - matters relating to habitat, ecosystem and socio-economic considerations;
 - matters relating to MCS; and

³⁰ See, for example, article 66 of UNCLOS.

- a dispute settlement mechanism.

4.3.1.2 Some current legal concerns about the Convention

Although current activities of NASCO are consistent with the Convention and there are good and productive relations among the Parties, the Convention does not adequately underpin current areas of focus, reflect evolving laws and priorities, cater for measures and actions to be taken in areas under fisheries jurisdiction, or guide actions of the Secretariat and the Parties.

Some of the major legal weaknesses include the following.

- The Convention fails to explicitly address the areas of focus for the Organization: management of salmon fisheries, habitat protection and restoration and aquaculture, introductions and transfers and transgenics.
- The Convention only applies to “the salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal States...” and not to any human activities in relation to those stocks (article 1).
- The Convention does not expressly set out the actions and measures to be taken under areas of fisheries jurisdiction.
- There is no reference to the types of decisions that may be taken by the Commission or their legal status, including for resolutions, recommendations, agreements and guidelines, and their legal implications (i.e. binding or not) are not made clear.
- Reference is made to the Commissions proposing “regulatory measures” and article 13 explains a process whereby the proposed regulatory measures may become binding and Parties may opt out, however, there are some concerns in this regard:
 - The Council does not appear to have any mandate over regulatory measures (article 4) without the specific request of a Commission. In the case of such a request, the mandate of the Council is limited to making a non-binding recommendation.
 - It is the role of the Secretary to notify the other members of the Commission of any proposed regulatory measure, who may then object.
 - The application of “regulatory measures” is not defined, but it can be implied that this would relate to fish stocks in areas beyond fisheries jurisdiction.
 - It could be useful if regulatory measures – whether binding or advisory - could be applied to areas of focus now addressed by the Organization.
- Given that the stocks in each Commission area are considered to be separate and that the binding nature of decision-making is therefore limited to each Commission,

it could be important for the Council in the future to have authority to adopt binding regulatory measures on current areas of focus of broader concern, such as habitat, aquaculture, transgenics and transfers.

These examples show some fundamental concerns on the Convention. Others are described in detail below in a review and analysis of the Convention.

4.3.1.3 Advantages of strengthening the NASCO Convention

It is recognized that there could be disadvantages to opening the Convention to re-negotiation in order to provide a clear legal basis for evolving objectives, areas of focus and practices. In the alternative, the Parties have embarked on the outcome-oriented 'Next Steps' process. The Parties have also agreed on interpretations of the Convention, for example, in relation to emergency measures.

However, there are many advantages to strengthening and "modernizing" the NASCO Convention and agreeing on a clear legal basis for the evolving obligations and activities under the Convention. They include:

- implementation of relevant rules and principles in international fisheries instruments;
- agreement on the legal obligations, measures and/or actions to be taken by Parties within and beyond areas of fisheries jurisdiction;
- providing a clear legal basis for the harmonization, implementation and enforcement of national laws, policies and strategies;
- avoidance of disputes; and
- addressing failures to implement or resulting uneven implementation by the Parties of the measures and actions agreed under the areas of focus.

Importantly, a relatively significant number of existing RFMOs have already amended their conventions. They include NAFO, NEAFC, the Western and Central Atlantic Fisheries Commission (WECAFC) and the European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC). The General Fisheries Commission for the Mediterranean (GFCM) has appointed a High Level Committee to review the recommendations of its performance review.

A number of new RFMOs with modern conventions have also been established in recent years to reflect current and evolving international law and practice, best practices of RFMOs and areas of focus of concern to those bodies.

Amendment of the convention is one route open to RFMOs to address gaps and update and strengthen the legal obligations of the contracting parties. There also may be other options, such as agreement on a legally-binding protocol that would serve the purpose equally well.

The Opening Statement made by NGOs in 2011 at the twenty-eighth Session of the Council recalled that the NGOs have regularly lobbied for Convention change so that NASCO resolutions become binding on all Parties in their management policies at home, and stated

that this remained their ultimate objective. The statement also referred to other mechanisms, such as binding EU Directives that have had the most significant impact on wild salmon conservation in NEAC over the last 5 years. Although the statement expressed the NGOs' short term concern for the immediate future of 'Next Steps', which has so far focused on process, they raised a valid concern and it would be timely to open discussion on a mechanism for binding decision-making by Council.

After reviewing the concerns and recommendations relating to the legal obligations and activities under the Convention described below, the Parties should consider the legal issues that need to be addressed and the mechanism that would best effect the modernization of the NASCO Convention. The Parties should be mindful during their review, that an updated and strengthened legal basis would support cooperation and implementation of the priority measures and actions identified by the NASCO Council and provide clear institutional functions and processes.

An indicative framework of provisions in an updated instrument is set out in section 4.3.3 below.

Recommendations

7. Considering that the NASCO Convention does not adequately reflect current applicable law and practice, it should be reviewed with a view to strengthening and modernizing the legal mandate of NASCO and the obligations of the Parties.

8. In parallel, or as an alternative, it is recommended that other options be considered for such strengthening and modernization, such as agreement on a legally-binding protocol.

9. As a first step, Parties should consider the legal issues that should be addressed, as described below, and the mechanism that would best effect the modernization of NASCO. To assist such a review, an indicative framework of provisions in an updated instrument is provided in section 4.3.3.

4.3.2 Assessment of the Convention

An assessment of each article of the Convention appears below. For each article, the contents are summarized in italics, concerns with the provisions of the article are stated and recommendations for consideration in developing a new instrument are made.

The articles of the Convention are designated only by number; contrary to current best practices, there is no title indicating the contents of the article in the Convention. In the following assessment, indicative titles have been included to facilitate understanding of each article and of the broader framework of the Convention.

Where the Convention does not address a provision that should be considered for inclusion in an agreed instrument, this is indicated by "No article".

ARTICLE 1 - PREAMBLE

The preamble to the Convention has four paragraphs, stating that the Parties:

- *recognize that “salmon originating in the rivers of different States intermingle in certain parts of the North Atlantic Ocean”;*
- *take into account international law, including the provisions of the “draft” UNCLOS;*
- *desire to promote the acquisition, analysis and dissemination scientific information relating to the salmon stocks; and*
- *desire to promote their conservation, restoration, enhancement and rational management.*

Concerns: The preamble of an instrument normally sets the tone for the body of the agreement. It reflects the broader background against which the instrument has been developed, the concerns of the Parties and their resolve to address those concerns.

The first two priorities in the preamble to the Convention are on the Draft Convention on the Law of the Sea and on scientific information.³¹ As a third priority only, the Convention refers to the conservation, restoration, enhancement and rational management of salmon stocks in the North Atlantic Ocean through international cooperation.

Mindful of the evolution of NASCO since 1982, and referring to best practices of other international fisheries instruments, it is suggested that some key elements should be considered for a preamble if the Convention is to be updated or another instrument developed, as follows:

- reference to the State of origin having the primary interest in and responsibility for the management of such anadromous stocks, consistent with international law;³²
- acknowledgement of the fundamental importance of international cooperation and implementation of international fisheries instruments and principles would foreshadow the “cooperation and consultation” that is required in the text of the Convention and demonstrate political will;
- shifting the first priority expressed in the preamble to the Convention, scientific information, to the range of other elements being addressed by the Organization, such as relevant environmental and economic factors, fishing patterns, the interdependence of stocks, associated or dependent species, scientific evidence and catch and fishing effort statistics;³³

³¹ As a matter of legal drafting, priority areas to be used as the basis of an instrument normally appear first in a list.

³² Article 66(1) of UNCLOS provides it is the States in whose rivers anadromous stocks originate that shall have the primary interest in and responsibility for such stocks.

³³ This example is drawn from article 61 of UNLCOS.

- commitment to a stated objective such as long-term sustainable use that underpins current areas of focus and/or challenges of NASCO (this would involve reviewing NASCO’s activities described as “the promotion of conservation, restoration, enhancement and rational management”, which are secondary to scientific information);
- consideration of current principles, approaches and areas of focus of the international community, such as the environment, biodiversity, climate change, and the precautionary and ecosystem approaches.

Recommendation

10. The preamble of the Convention should be broadened and updated to reflect current priorities.

NO ARTICLE - DEFINITIONS

Concern: It is standard for international fisheries instruments and RFMO conventions to define key terms used in the instrument so there is common understanding and coordinated implementation. The Convention does not provide such definitions. For example, “ecologically related species”³⁴ “enhancement”,³⁵ “fishing”, “fishing vessel” and “regulatory measure” would all be key terms.

Other RFMOs have recognized the need to add definitions for clarity in their measures and actions. For example, NEAFC adopted a Declaration defining “fishery resources”, “living marine resources” and “marine biological diversity”, and included them in the current NEAFC Convention.

Clear definitions would strengthen the common understanding of the scope of the Convention and facilitate harmonized application and implementation.

Recommendation

11. Key definitions should be agreed under the Convention, *inter alia*, to facilitate harmonize application and implementation.

³⁴ For example, the Convention for the Conservation of Anadromous stocks in the North Pacific Ocean defines “ecologically related species” as living marine species which are associated with anadromous stocks found in the Convention Area, including but not restricted to both predators and prey of anadromous stocks.

³⁵ For example, the Treaty between the Government of Canada and the Government of the United States of America concerning Pacific Salmon defines enhancement as “man-made improvements to natural habitats of application of artificial fish culture technology that will lead to the increase of salmon stocks”.

ARTICLE 1 – APPLICATION

The Convention applies to “the salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal States of the Atlantic Ocean north of 36 degrees N latitude throughout their migratory range”.

Nothing in the Convention is to “affect the rights, claims, or views of any Party with regard to the limits or extent of jurisdiction over fisheries, nor shall it prejudice the views or positions of any party with respect to the law of the sea”.

Concerns: As noted above, in a strict legal sense the Convention only applies to *migrating fish* within a *geographical area*, and not to *human activities*:

- in relation to such fish in that geographical area;
- in relation to the fish that *may or may not* enter that geographical area (e.g., those subject to aquaculture activities under the Convention, due to changing patterns of migration because of climate change);
- that restore the habitat of riverine fish, some of which may not enter that geographical area;
- that do not take place in the geographical area.

It may be argued that the stated objectives (in article 3) of restoration and enhancement imply that the Convention applies also to habitat and aquaculture activities within areas of fisheries jurisdiction. There are two concerns in this regard.

First, the article 3 objectives of “conservation, restoration, enhancement and rational management” are expressed as objectives of the Organization, not the Convention (see discussion under article 3 below). States are bound by the Convention. It could, thus, be argued that they are not legally bound to implement the objectives of the Organization. In addition the Council does not have express authority to take decisions that are legally binding on Parties.

Second, because article 1 only applies to salmon stocks in a certain area, activities relating to restoration and enhancement could be challenged on the basis that the salmon do not, or may not, occur in that area.

This presents a legal ambiguity, and although this has not yet been an issue for Parties it could become so with further changed circumstances in the activities of the Organization as well as evolving domestic laws and priorities and other international obligations of the Parties.

For example, the process of preparing new implementation plans and annual reports and assessing outcomes is underway. If the “application” of the Convention explicitly extended to activities of Parties in relation to North Atlantic Salmon taken within areas of fisheries jurisdiction, the obligations of Parties in respect of the preparation and implementation of such plans and reports would have a clearer legal basis.

Another issue is whether the Convention applies to salmon in the Arctic Ocean. The reference in article 1(1) is to “salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal States of the Atlantic Ocean north of 36°N Latitude throughout their migratory range”. Here, the reference is to “coastal States of the Atlantic Ocean”. There is only an implied requirement that the salmon must originate in those States.

Therefore, salmon found in areas beyond the jurisdiction of coastal States and north of 36°N Latitude, even in the Arctic, would implicitly come under the mandate of the Organization. It is also implied that the coast of the State may lie wholly or partly in the Atlantic Ocean, but the Convention is not precise in this regard.

In addition, there is no indication that the Convention applies to activities related to fishing. Related activities are usually defined as any operation in support of, or in preparation for, fishing, including the landing, packaging, processing, transshipping or transporting of fish, as well as the provisioning of personnel, fuel, gear and other supplies at sea.

If IUU fishing in the area of the Convention becomes an issue, application to related activities and the use of compliance tools, such as port State measures, could become useful.

Finally, article 1 also addresses a topic that is normally placed in a separate article titled “Relationship with international instruments”: the application of the law of the sea (now UNCLOS). The usual formulation is normally broader: “Nothing in this Agreement shall prejudice the rights, jurisdiction and duties of Parties under international law.”

It is standard for the Parties to be legally bound to apply the Convention in a fair, transparent and non-discriminatory manner; this appears to be the case but inclusion of such a requirement would be appropriate.

Recommendations

12. The application of the Convention to salmon beyond areas of fisheries jurisdiction and to activities within fisheries jurisdiction should be more precisely defined so that the legal obligations of the Parties are clear.

13. Consideration should be given to whether the Convention should apply to “related activities”.

14. Application of international law to the interpretation and implementation of the Convention should be updated and specified.

15. A duty of the Parties to apply the Convention in a fair, transparent and non-discriminatory manner should be considered.

NO ARTICLE – GENERAL PRINCIPLES

Concern: It is standard for international fisheries instruments to contain a provision setting out the general principles upon which decisions must be based. The Convention does not have such an article, although NASCO has adopted many of the principles in its work. Examples of relevant principles are:

- ensure long-term sustainable use of the fish stocks;
- assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;
- minimize pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species, and impacts on associated or dependent species, in particular endangered species;
- protect biodiversity;
- collect and share, in a timely manner, complete and accurate data as well as information from national and international research programmes;
- promote and conduct scientific research and develop appropriate technologies in support of fishery conservation and management; and
- implement and enforce conservation and management measures through effective monitoring, control and surveillance.

Recommendation

16. Parties should consider agreeing on a set of guiding principles to be used in implementing the Convention, taking into account the Next Steps process.

ARTICLE 2 – CLOSED AREA, NON-PARTIES

Salmon fishing is prohibited beyond areas of fisheries jurisdiction of coastal States. The Convention also puts limits on salmon fishing within areas of fisheries jurisdiction.

Parties shall “invite the attention” of non-Parties to any activities by their vessels which “appears to affect adversely the conservation, restoration, enhancement or rational management of salmon stocks...or the implementation of this Convention”.

Concerns: Two separate areas of law are joined in this article. The text concerning areas closed to fishing does not require amendments.

Pursuant to article 2, salmon fishing is prohibited beyond areas of fisheries jurisdiction of the coastal States.³⁶ Within areas of fisheries jurisdiction, salmon fishing is prohibited beyond 12 nautical miles from the baselines of coastal States, with two exceptions. In the

³⁶ Although “fisheries jurisdiction” is not defined in the Convention, it is taken to mean an area up to 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

WGC area, fishing is permitted up to 40 nautical miles from the baselines, while in the NEAC area fishing is permitted within the area of fisheries jurisdiction of the Faroe Islands.³⁷ Although adopted prior to UNCLOS, these provisions of the Convention are largely consistent with article 66 of UNCLOS.

The requirement relating to non-Parties was successfully invoked by carrying out demarches in the 1990s when it was found that vessels flying the flags of non-Parties were fishing in areas beyond fisheries jurisdiction. In addition, a Protocol was adopted in 1992³⁸ for signature by States not Parties to the Convention.

While it is acknowledged that fishing by non-Parties in areas beyond fisheries jurisdiction currently does not appear to be a problem, cooperation of non-Parties may be sought in the context of preventing adverse impacts which could extend to activities beyond targeted salmon fishing in areas beyond fisheries jurisdiction.

The Convention does not reflect strengthened international law and practice in relation to non-Parties in the following ways:

- It relates only to “vessels” and not their “nationals”, which would include persons. In this sense, nationals that are not connected with a vessel may also be responsible for adverse impacts in relation to fishing or non-fishing activities carried out under the Convention.
- It does not take into account the duty of non-Parties to cooperate, consistent with best practices, the United Nations Fish Stocks Agreement³⁹ and other international instruments.
- It does not refer to the failure to cooperate; the only criterion is that a vessel’s activities must appear to “affect adversely”.
- It does not provide for other measures to be taken where there is failure to cooperate or an apparent adverse effect, unlike the best practices of other RFMOs which deter non-compliance by non-Parties through mechanisms, such as information exchange.
- Additional measures and actions could be taken into account, including those encouraged under the IPOA-IUU.

Recommendations

17. Mindful that the NASCO areas of focus have expanded beyond the management of salmon fisheries, Parties should consider the need for provisions relating to the duties of non-Parties to ensure their nationals cooperate in the implementation of the Convention and the measures that Parties may/must take to address the failure to cooperate or apparent adverse effects by their own nationals.

³⁷ In 1996, the Council agreed that there should be exceptions to the prohibitions detailed in these paragraphs so as to permit research fishing by the Parties. A Resolution on Scientific Research Fishing was adopted which details the conditions under which research fishing may be conducted (CNL(96)60).

³⁸ CNL(92)53.

³⁹ Article 8(3).

18. The Parties could consider updating the term “fisheries jurisdiction” with “exclusive economic zone”.

ARTICLE 3 – ESTABLISHMENT OF THE ORGANIZATION, OBJECTIVE

This article establishes NASCO and sets out its objective, institutional structure, areas of the Commissions, legal personality, official languages and headquarters.

Concerns: There are concerns about the objective and institutional structure of the Organization.

The objective of the Organization, consistent with various elements of article 66 of UNCLOS, states that it shall be:

“to contribute through consultation and cooperation to the conservation, restoration, enhancement and rational management of salmon stocks subject to this Convention, taking into account the best scientific evidence available to it”.

There is a legal discrepancy between article 3, which clearly refers to the objective of the *Organization*, and later references to the objective in article 4(1)(a) and (h), which refer instead to the objective of the *Convention*. In fact, an objective for the Convention is not defined.

The legal implication of tying the objective to the Organization rather than the Convention is that it does not directly apply to Parties, as noted in the discussion under article 1.

If an objective for the Convention were to be introduced, the following elements should be considered:

- the objectives of international instruments developed since 1982, including the long-term conservation, management and sustainable use of salmon stocks and the aquatic and marine ecosystems in which they occur;
- whether the objective of the Organization is sufficient. It is recognized that some flexibility is needed, but there are some concerns:
 - “contributing” to outcomes is flexible but a minimum criterion – for example, “promoting” would denote a stronger level of commitment;
 - “consultation and cooperation” does not suggest the range of NASCO’s current activities in the Next Steps process (e.g., implementation of strategies and plans); nor does it reflect the mandates of the Commissions to adopt regulatory measures;
 - “best scientific evidence” does not take into account other information, such as environmental, socio-economic and other;

- the focus is salmon stocks, and habitat and aquaculture are only covered by implication, as described in the commentary under article 1.

The current three theme areas of NASCO could be considered to serve as overall objectives for the Organization as follows:⁴⁰

Management of salmon fisheries: promote the diversity and abundance of salmon stocks and maintain all stocks above their conservation limits.

Protection and restoration of Atlantic salmon habitat: maintain and, where possible, increase the current productive capacity of Atlantic salmon habitat.

Management of aquaculture, introductions and transfers and transgenics: minimise the possible adverse impacts of aquaculture, introductions and transfers and transgenics on the wild stocks of Atlantic salmon, including working with industry stakeholders, where appropriate.

The *institutional structure* of the Organization is comprised of the Council, three regional Commissions and a Secretary. This article does not provide for the establishment of subsidiary bodies or *ad hoc* bodies such as working groups, or rules for their establishment and procedure. In fact, two bodies have been established by NASCO, the Finance Committee and the Standing Scientific Advisory Group.

Best practices of RFMOs are to include a provision on institutional arrangements that designate a Secretariat, rather than a Secretary. The appointment of a Secretary and functions of the Secretariat are then provided. Rules of procedure may elaborate on this, including specifying the duties of the Secretary. This is not addressed in the Convention.

It is acknowledged that there has been no need for rules relating to the appointment and duties of a Secretary because of the excellent leadership of the current Secretary since the establishment of the Organization, but the need to provide a basis to guide future processes in this regard is suggested.

Recommendations

19. The objectives of the Convention, and of the Organization, are fundamental for the decisions and legal obligations of the Parties. These should be reviewed and updated as appropriate.

20. The institutional structure should be reviewed and amended as appropriate to include subsidiary bodies and a Secretariat, as well as rules for appointment of a Secretary and the duties of the Secretary. Authority and procedures for the establishment of *ad hoc* bodies should be provided.

⁴⁰ See Strategic Approach (CNL(05)49) and WGFR(11)8.

ARTICLE 4 – THE COUNCIL

Functions and authorities of the Council are described in paragraph 1 of this article. Functions include serving as a forum, a coordinating and supervisory body and establishing working arrangements with other organizations.

In addition, the Council may “perform such other functions as are conferred on it by this Convention”.

The Council has the authority to make recommendations to the Parties and Commissions on matters concerning salmon stocks subject to this Convention, including the enforcement of laws and regulations, except for management of salmon harvests within the area of fisheries jurisdiction of a Party.

The Council may make recommendations to a Commission, at the request of the Commission, on regulatory measures which the Commission may propose.

Concerns: The concerns relate to the Council’s functions in two respects: those that are of a coordinating or administrative nature, and those that are recommendatory.

The scope of matters for which the Council may serve as a *forum* is limited to the salmon stocks:

- in respect of the study, analysis and exchange of information on matters concerning the salmon stocks “subject to this Convention”; and
- in respect of consultation and cooperation on matters concerning the salmon stocks “in the North Atlantic Ocean beyond Commission Areas”.

As noted in the discussion under article 1, events have overtaken such limitations, and the Council increasingly serves as a forum for activities under fisheries jurisdiction and matters beyond the directed fishing of salmon. This is not currently reflected in the Convention, and it would be useful to recognize this situation.

The Council also functions in providing a forum for consultation and co-operation on matters concerning the salmon stocks in the North Atlantic Ocean beyond Commission areas, pursuant to article 4.1. Given the definitions of the Commission areas in article 3.4, this area would be restricted to the narrow area to the east of the NAC area to the boundary of the WGC and the NEAC areas.

The Convention provides that the Council may also serve as a forum “on the achievement of the objective of the Convention”. There is no stated objective of the Convention; article 3(2) refers to an objective of the Organization, as discussed above.

In general, the Council’s function to serve as a forum for cooperation and coordination reflects a passive role when in fact the ‘Next Steps’ process shows the need for pro-active decision-making, direction, monitoring and evaluation. Functions of the Council should be

framed accordingly so that its role is not simply of a forum, but one of considering and deciding on relevant issues and monitoring and promoting their implementation.

As described below, the Council could have two kinds of *decision-making functions*: those that are binding and those that are advisory only.

The Council serves as a coordinating and supervisory decision-making body in respect of the activities of the Commissions, the activities of vessels of non-Parties under article 2(3), the administrative, financial and other internal affairs of the Organization and the external relations of the Organization.

These functions do not take into account cross-cutting activities that may be of interest to all Parties, and therefore the Council as a whole. If the Council is to be given a pro-active role, it should also coordinate and make decisions or recommendations on cross-cutting activities carried out within the jurisdiction of Parties, such as habitat restoration and aquaculture, transfers and transgenics.

The Council has a role to establish working arrangements with ICES and other “appropriate fisheries and scientific organizations”. This function is too narrow and does not take into account integrated ecosystem approaches. It does not cover arrangements with other relevant organizations that have mandates broader than fisheries and science. For example, North-East Atlantic fisheries bodies such as NEAFC liaise with organizations such as OSPAR.⁴¹ The Council’s mandate should likewise be broader in order to recognize the establishment of working arrangements with any regional or international organization or institution that shares similar objectives to NASCO.

Unlike the decision-making power in the 1980 NEAFC Convention,⁴² which was developed at about the same time as the NASCO Convention and has some similar provisions, the NASCO Convention does not permit the Council to take a binding decision on matters within fisheries jurisdiction even where the relevant Party has requested the decision and voted affirmatively.

The Council may make *recommendations* in respect of three areas:

- to the Parties, ICES or other appropriate fisheries and scientific organizations concerning the undertaking of scientific research;⁴³
- to the Parties and the Commissions on matters concerning salmon stocks subject to this Convention, including the enforcement of laws and regulations, provided that no recommendation shall be made concerning the management of salmon harvests within the area of fisheries jurisdiction of a Party;⁴⁴ and

⁴¹ OSPAR has a broad-based mandate under which parties are obligated to prevent and eliminate pollution, including to protect the maritime area against the adverse effects of human activities to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.

⁴² 1980 Convention on Future Multilateral Cooperation in Northeast Atlantic Fisheries, article 8(2).

⁴³ Paragraph 4.1.

⁴⁴ Paragraph 4.2.

- upon the specific request of a Commission, the Council has authority to make recommendations to that Commission on regulatory measures which the Commission may propose pursuant to this Convention.⁴⁵

The Convention does not specifically define the legal status of the recommendations and decisions to be made by Council (i.e., binding or advisory). In the absence of an explicit provision, it is taken that the decisions are non-binding. The only reference to binding decisions in the Convention is in article 13 in relation to regulatory measures proposed by the Commissions.

In practice, the Council has adopted resolutions, as well as “decisions” in the context of the Strategic Approach and the ‘Next Steps’ process. The range of titles include: decisions, agreements, resolutions, recommendations, guidelines, action plans and explanatory notes. For example, regarding scientific research, the Council adopted a resolution concerning Scientific Research Fishing in 1996 under the authority of article 4.⁴⁶ Resolutions have also been adopted to address salmon fishing in areas beyond fisheries jurisdiction by non-Parties.

Some areas where the logic or legal reasons for decision-making should be reconsidered are:

- The Council is prohibited to make a non-binding recommendation “concerning the management of salmon harvests within the area of fisheries jurisdiction of a Party”. However, it is empowered to make non-binding recommendations on the enforcement of laws and regulations, which would most logically concern laws and regulations in areas under fisheries jurisdiction.
- Although the Council can make non-binding recommendations on the enforcement of laws and regulations, the Convention does not clearly permit this in relation to enforcement of NASCO regulatory measures.⁴⁷
- The areas over which NASCO may make recommendations should be clarified. For example, although the Council may make recommendations on enforcement, the Organization generally does not have a mandate for enforcement. It would be useful to consider clarifying the status of, or authority to make recommendations in relation to, for example, enforcement of matters relating to adverse impacts from aquaculture operations that could have transboundary effects.
- In the context of making a recommendation on regulatory measures that may be proposed by a Commission, at the request of that Commission, the Council seems to play an advisory role, or arbiter, in a three-step decision-making process.

⁴⁵ Paragraph 4.3.

⁴⁶ CNL(96)60. This was designated a resolution but invoked the authority to make a recommendation. The non-binding nature of these decisions is discussed below under “No article – Binding Resolutions”.

⁴⁷ This may be implied under article 4.2 where the Council could make a recommendation to a Commission on the enforcement or regulatory measures proposed by a Commission, or under article 4.3.

- The Convention does not provide the Council with authority to make decisions or recommendations in respect of cross-cutting issues, such as mixed stock fisheries. This is an area where the Council, rather than the Commissions, is more appropriately positioned to take decisions. In practice, the Council appears to have made such decisions, for example, in the context of the Next Steps process.

The decision-making authority of the Council is therefore legally ambiguous and limited. This may have been appropriate when the Convention was developed, given that the objective of the time was to control high seas salmon fishing by certain Parties and that the coastal States were unwilling to surrender any form of control in areas under fisheries jurisdiction.

As noted by the NGOs in NASCO, binding EU Directives have had the most significant impact on wild salmon conservation in NEAC over the last five years. These NGOs have regularly lobbied for Convention change so that NASCO resolutions become binding on all Parties in their national management policies.

It would be timely to open discussion on a mechanism for binding decision-making by the Council, at least in relation to high seas or distant water fishing. Current areas of focus on habitat and aquaculture and related issues, and issues such as mixed stock fisheries and control of sea lice would be more effectively addressed by a stronger Council with robust decision-making functions that apply to activities carried out within and beyond areas under fisheries jurisdiction. It may also be appropriate to consider a mandate for binding decision-making in relation to cross-cutting issues of national importance, consistent with the objectives in the 'Next Steps' process. In such a case, the designation of the instrument in which the decision would appear (e.g., resolution or protocol) should be clearly spelled out, as well as the process for taking such a decision and its entry into force.

One option is to allow for binding protocols to be agreed by Parties under the Convention, and to provide a process for their conclusion and entry into force. This option has been used by NASCO Parties even though it is not expressly provided in the Convention. For example, the 1992 Protocol Open for Signature by States Not Parties to the Convention⁴⁸ provided for signature, ratification and the deposit of applicable instruments with the Depositary. It was to have entered into force for each State one month after the date of deposit of its instrument of ratification or approval with the Depositary. The 2003 Convention for the Sustainable Management of Lake Tanganyika, which established the Lake Tanganyika Authority, provides an example where decision-making may be agreed by protocol.⁴⁹ It is noted, however, that decisions under any protocol may be taken only by the parties to the protocol concerned.

In addition to decision-making, the general functions of the Council should be reviewed for completeness. NASCO has recognized the value of, and taken actions to promote awareness raising and liaison with stakeholders, although not specifically mandated to do so as a function. It has also successfully established the International Atlantic Salmon Research Board. Although these forward-looking and important developments loosely fall within the

⁴⁸ CNL(92)53.

⁴⁹ Article 34.

objectives of the Organization, it would be consistent with the best practices of RFMOs to modernize and strengthen the legal basis for such functions in the Convention.

Recommendations

21. Council's functions should be reviewed with a view to designating a more pro-active role suitable for addressing current areas of focus and cross-cutting issues and allow for international relations with a broad range of relevant organizations. The functions should also be expanded, as appropriate, taking into account current and possible future activities.

22. The decision-making authority of the Council, both binding and advisory, should be considered and clearly stated. Areas in respect of which recommendations or other forms of decision may be made should be reviewed. Provision of a binding decision-making mechanism in instruments, such as resolutions or protocols under specified circumstances, is encouraged.

ARTICLE 5 – RULES ETC FOR THE COUNCIL

Membership, officers, meetings and reports of the Council.

This article appears to be satisfactory. There are no recommendations.

ARTICLE 6 – RULES OF PROCEDURE FOR THE COUNCIL

The Council must adopt its rules of procedures, voting requirements are set out.

This article appears to be satisfactory. There are no recommendations.

NO ARTICLE – SUBSIDIARY BODIES

Under rule 28 of the Council's Rules of Procedures, the Council is required to establish a Finance and Administration Committee and may establish such other subsidiary bodies as it deems necessary. It shall determine their composition and terms of reference.

It is standard practice to empower a body to establish subsidiary bodies in a convention, including their terms of reference, rather than in rules of procedure as provided in the NASCO Convention.

There are no articles or rules of procedure in the Convention authorizing the establishment of *ad hoc* bodies such as working groups, or setting out relevant authorities and procedures.

Recommendation

23. It is recommended that, as appropriate, consideration be given to adoption of rules

relating to the establishment of NASCO subsidiary and *ad hoc* bodies.

ARTICLE 7 – NORTH AMERICAN COMMISSION (NAC)

The functions of the NAC are set out, members must minimize by-catches of salmon originating in the rivers of another member, and fishing patterns must not be altered in certain manners.

There is confusion in the use of the terms “members” and “Parties” in articles 7 and 8, which both refer to the Commissions. This is confusing, both in the context of those articles and in the context of the Convention which uses the term “members” in relation to the Council (see, for example, article 6). There is no article defining the terms used. Article 10 clarifies this somewhat by designating Parties who are members of the Commissions.

Another layer of confusion is added because the members of the North American Commission are Canada and the United States of America but, in addition, the European Union has the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in its territory.

NAC has four functions:

- (a) to provide a forum for consultation and co-operation between the members:
 - (i) on matters related to minimizing catches in the area of fisheries jurisdiction of one member of salmon originating in the rivers of another Party; and
 - (ii) in cases where activities undertaken or proposed by one member affect salmon originating in the rivers of the other member because, for example, of biological interactions;
- (b) to propose regulatory measures for salmon fisheries under the jurisdiction of a member which harvest amounts of salmon significant to the other member in whose rivers that salmon originates, in order to minimize such harvests;
- (c) to propose regulatory measures for salmon fisheries under the jurisdiction of a member which harvest amounts of salmon significant to another Party in whose rivers that salmon originates; and
- (d) to make recommendations to the Council concerning the undertaking of scientific research.

This Commission has not proposed any regulatory measures since 1986.

The mandate of NAC is limited to the maritime waters within areas of fisheries jurisdiction of coastal States off the east coast of North America. It is noted that NAC does not have

regulatory authority over the area of the North Atlantic beyond the fisheries jurisdiction of its members extending to the boundary of the WGC and NEAC areas.

The mandate of NAC to propose regulatory measures arguably includes the internal waters and rivers of its members. This follows from the reference to “under the jurisdiction of a member” in paragraph 1(b), as opposed to “in the areas of fisheries jurisdiction” in the case of WGC and NEAC.

The reference in paragraph (b) to “salmon significant to the other member” and in paragraph (c) to “salmon significant to another Party” are somewhat vague. The basis for assessing “significance” is not described, and could relate, for example, to value, quantity, or endangered status.

This article also requires the members to take measures necessary to minimize by-catches of salmon originating in the rivers of the other member, and not to alter fishing patterns in a manner which results in the initiating of fishing or increase in catches of fishing of another Party, except with the consent of the latter. There are no such requirements in article 8 applicable to the other Commissions.

The functions do not refer to current areas of focus of NASCO, not even indirectly through restoration and enhancement, although these areas have been considered. In practice, NAC has focused on other matters, including introductions and transfers of aquatic species and their potential damaging effects on fish health, genetics and ecology.⁵⁰

Because the NAC has a broader mandate than the other two Commissions, broader reporting requirements will be needed in the preparation of reports in the NASCO Next Steps process.

Recommendation

24. The functions of the NAC should be reviewed and updated, together with the other obligations under this article. The functions should, to the extent necessary, be harmonized with those of the WGC and the NEAC and complement those of the Council.

ARTICLE 8 – WEST GREENLAND COMMISSION (WGC) AND NORTH-EAST ATLANTIC COMMISSION (NEAC)

The functions of the WGC and NEAC are described.

⁵⁰ See, for example, NAC(92)24. In 1995, NAC also adopted a Memorandum of Understanding to reconcile differences between the methods used by Canada and United States of America for authorization of introductions and transfers while recognizing the common goal of conservation and protection of wild Atlantic salmon (NAC(05)7).

Like NAC, the regulatory authority of WGC is limited to fishing in the area of fisheries jurisdiction of its members. This follows from provisions in the Convention on the defined areas of the Commissions (article 3.4) and the functions of the Commissions (article 8).

Pursuant to article 3.4, the NEAC area includes areas beyond the fisheries jurisdictions of its members. However, the regulatory mandate of NEAC is limited to fishing in the areas of fisheries jurisdiction of its members, pursuant to article 8(b).⁵¹ Nonetheless, matters relating to the conservation, restoration, enhancement and rational management of salmon stocks beyond areas of fisheries jurisdiction could be the subject of consultation and co-operation among NEAC members, pursuant to article 8(a).

The two Commissions have fewer functions than NAC. Like NAC, their primary function is to provide a forum, but unlike the functions of NAC their functions are more general and for purposes of:

“consultation and co-operation among the members concerning the conservation, restoration, enhancement and rational management of salmon stocks subject to this Convention;”

Again, unlike NAC, which focuses on proposing regulatory measures for fisheries harvesting *significant amounts* of salmon originating in another Party, these Commissions have the function of proposing:

“regulatory measures for fishing in the area of fisheries jurisdiction of a member of salmon originating in the rivers of other Parties”.

The one function shared by all three Commissions is to make recommendations to the Council concerning the undertaking of scientific research.

The functions of WCG and NEAC only indirectly refer to the current areas of focus of the Commission.

Recommendation

25. The functions of WCG and NEAC should be reviewed and updated and, to the extent necessary, harmonized with those of NAC and the Council.

ARTICLE 9 – CONSIDERATIONS FOR COMMISSIONS TO TAKE INTO ACCOUNT IN EXERCISING THEIR FUNCTIONS

Seven considerations for Commissions to take into account in exercising their functions are listed.

⁵¹ Canada and the USA have the right to submit and vote on proposals in NEAC, as provided in article 11.2 of the Convention.

Concerns: The considerations for Commissions to take into account in exercising their functions provide a common basis for decision-making but are largely science-based. They refer to information from scientific organizations, measures that affect the stocks, the efforts of States of origin to implement and enforce measures for the conservation, restoration, enhancement and rational management of salmon stocks under fisheries jurisdiction, feeding patterns of salmon, effects of harvesting salmon, the contribution of Parties not States of origin to salmon conservation for migratory stocks in their jurisdiction and the interests of dependent communities.

These considerations are adequate to discharge the functions of the Commissions as described in articles 7 and 8 of the Convention. However, as recommended above, the functions of the Commissions should be reviewed and updated.

In particular, these considerations only minimally relate to the challenges contained in the Strategic Approach.⁵² The challenges are specific and reflect considerations in the current NASCO areas of focus, which should also be integrated into the functions of the Commissions in a separate article.

The Organization has, over the years, adopted decisions, guidelines, agreements, resolutions and regulatory measures. These have been carefully developed and as appropriate should also be considered by Commissions in exercising their functions.

The Commission should be empowered to cooperate with and seek advice from relevant organizations and institutions, including those that do not have a specific fisheries science mandate.

Recommendation

26. The considerations for the Commissions to take into account in exercising their functions should be reviewed, expanded and updated. In particular, the considerations should take into account any functions of the Commissions that may be updated, the challenges described in the Strategic Approach, NASCO guidelines, agreements, resolutions and regulatory measures and advice from relevant organizations.

ARTICLE 10 – THE COMMISSIONS: PARTIES, AND PROCEDURES

Membership of the Commissions, observers and procedures for officers, attendance, meetings and reports are provided.

Concerns: The original members of the Commissions are shown, but over time they have changed. In addition, the name of the European Union should be updated.

⁵² Management of salmon fisheries; social and economic aspects of the Atlantic salmon; research on salmon at sea; protection and restoration of Atlantic salmon habitat; aquaculture, introductions and transfers and transgenics; *Gyrodactylus salaris*; and initiatives for endangered salmon populations.

Some recommendations have been made by NGOs for further changes, but these may require further dialogue to clarify the objective.⁵³

Recommendation

27. It is recommended that the provisions of this article be reviewed and updated to reflect current membership, practice and management needs.

ARTICLE 11 – COMMISSIONS’ RULES OF PROCEDURE

Commissions must adopt their rules of procedure, and submission and voting on proposals are addressed.

Decision-making is more generally addressed in section 7, below. This article and the Rules of Procedure appear to be satisfactory. There are no recommendations.

ARTICLE 12 - SECRETARY

The appointment of the Secretary and employment of the Secretary and staff are described, and the functions of the Secretary are set out.

Concerns: It was noted in discussion under article 3 that the Convention does not refer to the establishment or functions of a Secretariat, and this might be considered.

Three functions are described for the Secretary: administrative services, compile and disseminate statistics and reports concerning the salmon stocks; and other. The only substantive function, relating to statistics and reports, is particularly narrow. The current Secretary has performed duties well beyond this function in an exemplary manner, and these functions should be made more explicit.⁵⁴

NASCO has a lean and efficient Secretariat, and the duties of the Secretary should be reasonably robust to support the continuation of this situation. Functions could therefore include, for example, actions already undertaken by the Secretary such as: facilitating the collection of information and data necessary to accomplish the objectives, principles, functions and responsibilities of the Organization; coordinating such processes for institutional strengthening as may be agreed by the Organization; and facilitating cooperation between the Commission and national, regional and international organizations on matters of mutual interest.

⁵³ They were, at the time of writing, for NAC: Include consideration of 1sw fish (grilse) and enable Greenland and possibly St. Pierre and Miquelon to intercede with other Parties on interception. For NEAC: Allow Parties to intercede with each other on interception.

⁵⁴ For example, a number of specific tasks were requested of the Secretary in the 1992 Resolution to address IUU fishing.

Recommendation

28. The description of the functions of the Secretary should be reviewed, expanded and modernized to reflect actual practice. This can be elaborated in rules of procedure.

ARTICLE 13 – REGULATORY MEASURES

A process for adoption and implementation of regulatory measures by Commissions is provided. Briefly:

- *Regulatory measures become binding on Commission members 60 days after the date notified or a later date specified by the Commission. Where a member objects within the 60 days, it is not binding on any member. Where an objection is withdrawn, it becomes binding.*
- *A regulatory measure may be denounced after one year, and cease to become binding on all members.*
- *A Commission may propose an emergency regulatory measure that has effect prior to the 60 day waiting period, and the members must make best efforts to implement it, unless there is an objection.*

Comprehensive regulatory measures have been adopted by the Commissions in the past. Over the past ten years, however, measures for the West Greenland fishery have been for internal use fisheries only and no quota has been set for the Faroese fishery, although decisions have been adopted requiring any fishery to be managed on the basis of the scientific advice from ICES, in a precautionary manner and with a view to sustainability. In accordance with this decision, there has been no harvest since 2000. There have been no regulatory measures for NAC since 1986.

In such a situation, the legal requirements in this article, although still applicable, have fallen into disuse. If they were to be reactivated, thought should be given to adopting an approach used in best practices of RFMOs, to require that an objecting party provide clear information and justification for the objection (also see section 6).

Recommendation

29. The regulatory and other measures reflecting the scientific advice should continue to be set and, in this regard, efforts to develop a risk framework for the Faroese fishery are encouraged.

NO ARTICLE – DECISION-MAKING PROCESS FOR COUNCIL

A major shortcoming is that there is no clear authority for binding decisions in the Convention, apart from regulatory measures that may be taken by the Commissions. This was discussed above under article 4 describing the functions of the Council.

It would be useful if binding resolutions or other forms of decision such as protocols could be taken by Council, especially since the challenges described in the 'Next Steps' process are applicable to all Parties. Binding decisions could be taken by Council on matters that are within areas of fisheries jurisdiction of Parties under specified circumstances (e.g., if the Party requests and supports such a decision).

Until now, there has been an uneven approach towards resolutions. Four substantive resolutions have been adopted by the Council, which have had a different legal basis in the Convention:

- 1990 Resolution on Fishing for Salmon in International Waters, which referred in its preamble to article 2(3) of the Convention and called on the Parties to take diplomatic action to address fishing by vessels of non-Parties,⁵⁵
- 1992 Resolution on Fishing for Salmon on the High Seas, which referred in its preamble to article 2(3) of the Convention and addressed fishing by vessels of non-Parties;⁵⁶
- 1996 Resolution on Scientific Research Fishing, which referred in its preamble to article 4 of the Convention empowering the Council to make recommendations to the Parties, ICES and other appropriate fisheries and scientific organizations concerning the undertaking of scientific research;⁵⁷ and
- 2003 Resolution to Minimise Impacts from Aquaculture, Introductions and Transfers, and Transgenics on the Wild Salmon Stocks (The Williamsburg Resolution), which did not refer to a specific article of the Convention in its preamble, but which noted that the Convention "seeks to promote the conservation, restoration, enhancement and rational management of salmon stocks".⁵⁸

Recommendation

30. Consideration should be given to empowering the Council to take decisions that are binding on the Parties, as appropriate in the form of resolutions, protocols or other.

⁵⁵ CNL(90)49.

⁵⁶ CNL(92)54.

⁵⁷ CNL(96)60.

⁵⁸ CNL(06)48.

ARTICLE 14 – DUTIES OF PARTIES TO IMPLEMENT CONVENTION

Parties must ensure that action is taken necessary to “make effective” the provisions of the Convention including through adequate penalties for violations, and implement binding regulatory measures. They must transmit an annual statement of actions in this regard to Council.

Concerns: The NASCO Convention, unlike other RFMO conventions, does not give the Council a mandate for monitoring, control and surveillance of any of the activities foreshadowed in the Convention; as noted above, the mandate of the Council is more focused on scientific information. This may have been appropriate at the time because the Convention spans a range of activities in addition to fishing, including restoration and enhancement within areas of fisheries jurisdiction.

However, a broad duty for Parties to “make effective” the provisions of the Convention including through adequate penalties for violations falls considerably short of the duties to implement in modern international instruments. It is also inapplicable to some current areas of focus, for example, the restoration of riverine systems, which is a responsibility of the State. A State cannot impose penalties on itself, but can be liable for compensation if it fails to comply with international obligations.

Articles 14 and 15 only require Parties to implement “regulatory measures which become binding on it”. There is no obligation or encouragement to implement in law or practice the broader body of decisions, agreements, guidelines, plans etc. The articles require in an equally limited manner the Parties to provide information, referring primarily to catch statistics, scientific and statistical information.

The obligations on Parties to ensure effective control of vessels flying their flags, as provided in modern fisheries instruments, should also be made more explicit.

It would be in keeping with provisions and principles in international fisheries instruments and the best practices of RFMOs to ensure implementation and compliance by undertaking the following:

- Requiring Parties to comply with the Convention and implement its provisions and any binding decision agreed under it through legislation and other effective means and action.
- Requiring Parties to ensure compliance by their nationals (persons and vessels) in two respects:
 - when they are within areas of fisheries jurisdiction; and
 - when they are beyond areas of fisheries jurisdiction and under the jurisdiction of another Party or within the Commission areas;
- Where the decision is not legally binding, requiring Parties to make best efforts in good faith to ensure that the implementation occurs.

Compliance and enforcement issues are addressed in section 6.

Recommendation

31. The duties of Parties to implement the Convention and ensure compliance with it by their nationals should be reviewed and strengthened, particularly in the context of current areas of focus of the Organization.

ARTICLE 15 – DUTIES OF PARTIES TO PROVIDE STATISTICS AND OTHER INFORMATION

Parties must provide a range of information, most of which relates to catch and other salmon statistics and scientific information as well as relevant laws, regulations and programmes in force.

Concerns: This article fails to capture the need for reporting outcomes, as expressed in the Next Steps process. It would have been useful in 1982 to require Parties to notify the Council, on an annual basis, of various statistics and information about laws, commitments by responsible authorities and factors which may significantly affect the abundance of salmon stocks. Today, this could simply result in an avalanche of information that may not be relevant to existing areas of focus.

Information on laws, regulations and programmes provides an indicator of the preparedness of Parties to take action to implement the Convention and decisions taken under it. However, as recently recommended in the context of the 'Next Steps' process, it is also crucial that information is received by the Organization on the outcomes of the implementation of the laws, programmes and other activities.

Although there is still a need for information requirements to be identified under the Convention, they should be captured in broader terms and tailored to meeting the challenges identified in the 'Next Steps' process (see section 3).

Recommendation

32. Obligations for Parties to provide information should be reviewed and updated, consistent with the recommendations of the 'Next Steps' Review Group and the Working Group on Future Reporting. The type of information required by the Organization to meet the challenges identified in the 'Next Steps' process should be prioritized and identified, and information requirements concerning outcomes of actions taken to implement NASCO programmes or decisions should be required.

ARTICLE 16 - BUDGET

Provides for contributions and a budgetary process. A Party which has not paid contributions for two consecutive years is not entitled to vote.

The requirements in this article are satisfactory and no recommendations are made. Financial and administrative issues are elaborated in section 9.

NO ARTICLE – DISPUTE SETTLEMENT

Best practices in international instruments, including RFMO conventions, include an article on dispute settlement. This normally encourages disputes to be resolved through negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means. It can also refer to dispute settlement processes, such as the establishment of an *ad hoc* expert panel and those agreed under broader international instruments such as UNLCOS or the United Nations Fish Stocks Agreement, which could result in proceedings before the International Tribunal on the Law of the Sea. It is seen as a preventive measure that encourages cooperation among parties.

Dispute settlement issues are considered in section 7.

Recommendation

33. NASCO should consider the need for a binding and compulsory dispute settlement mechanism.

ARTICLE 17 – SIGNATURE, RATIFICATION, ENTRY INTO FORCE, DUTIES OF DEPOSITARY

ARTICLE 18 – APPLICATION OF CONVENTION TO EC TERRITORIES

ARTICLE 19 – AMENDMENTS

ARTICLE 20 – DENUNCIATION

ARTICLE 21 - DEPOSITARY

These articles contain standard final clauses, and no recommendations are made. If it is decided to negotiate a new instrument, these articles will need to be revisited and updated.

4.3.3 Indicative framework for provisions in an updated instrument

The recommendations in part 4.3 were made with a view to informing about areas that should be reviewed and considered in the context of revising the existing Convention or developing an instrument such as a protocol that provides a firm and applicable legal basis for current and future activities of NASCO and the Parties.

For easier comprehension, an indicative framework for provisions in an updated instrument is provided below, based on the commentary in part 4.3.

1 - PREAMBLE

The preamble should take into account, *inter alia*, relevant international instruments, the current situation, an objective of the Convention, the value of cooperating through the Commission and the commitment of the Parties to achieve stated goals.

2– DEFINITIONS

Definitions of key terms in the Convention would provide a clear and common foundation for legal responsibility and to guide legal implementation at national level.

3 - OBJECTIVE

A general objective of the Convention could be stated to guide its application and interpretation, such as the long-term conservation, management and sustainable use of salmon stocks and the aquatic and marine ecosystems in which they occur, and to provide sustainable economic, environmental and social benefits.⁵⁹

4 – APPLICATION OF THE CONVENTION

The application of the Convention to salmon in specified areas beyond national jurisdiction and to certain activities within national jurisdiction should be precisely defined so that the legal obligations of the Parties are clear.

Consideration should be given to whether the Convention should also apply to “fishing related activities”, in line with the practice in international fisheries instruments and other RFMOs.

Application of the Convention should be fair, transparent and non-discriminatory, consistent with international law and best practices of RFMOs.

5 – RELATIONSHIP WITH INTERNATIONAL LAW

The relationship with international law and other international instruments should be explained, noting for example that the Convention is to be interpreted consistently with relevant provisions of UNCLOS.

A non-prejudice clause for parties could be included stating that nothing in the Convention shall prejudice the rights, jurisdiction and duties of Parties under international law.

6 – COOPERATION AND EXCHANGE OF INFORMATION

⁵⁹ The function of the Organization could be to achieve this, for example, through conservation and management, restoration, enhancement and/or other activities.

Parties agree to cooperate and collaborate to promote the effective implementation of the Convention, including through research, providing and exchanging information and taking measures in support of the objectives of the Convention and decisions of the Organization.

Information currently required to be provided under article 15 of the Convention should be reviewed, broadened as appropriate to take into account the 'Next Steps' process and included.

7 – GENERAL PRINCIPLES

A set of guiding principles to form the basis for implementing the Convention could be included, consistent with principles already adopted by the Organization, international fisheries instruments and best practices of RFMOs.

8 – ESTABLISHMENT OF THE ORGANIZATION

The establishment, functions/mandate, institutional structure and other details of the Organization are provided.

This may include subsidiary bodies or authority to establish subsidiary and *ad hoc* bodies, relations with other organizations and provisions relating to a Secretariat, headquarters and language.

9 – THE COUNCIL

The functions of the Council are stated, taking into account the range of current and possible future activities.

The authority of the Council to make, as appropriate, binding decisions under specified circumstances and non-binding recommendations or other decisions should be stated. Names and mechanisms for such decisions and their legal effect should be designated (e.g., resolutions and protocols could be binding, recommendations could be advisory). If the Council is permitted to make binding decisions, the process for entry into force of the decisions should be stated here or elsewhere.

10–RULES, ETC. FOR THE COUNCIL

Membership, officers, meetings and reports of the Council.

11 – RULES OF PROCEDURE FOR THE COUNCIL

The Council must adopt its rules of procedures, voting requirements are set out.

11 – SUBSIDIARY AND OTHER BODIES

Either establish subsidiary bodies in the Convention or empower the Organization to establish subsidiary and *ad hoc* bodies or working groups, provide for the adoption of their rules of procedure of the bodies.

12 – COMMISSIONS

The membership and functions of the Commissions should be provided, including the decision-making authority and process.

13 - CONSIDERATIONS FOR COMMISSIONS TO TAKE INTO ACCOUNT IN EXERCISING THEIR FUNCTIONS

Considerations for the Commissions to take into account in exercising their functions, in particular, those that may be updated taking into account the challenges identified in the Strategic Approach, NASCO guidelines, agreements, resolutions and regulatory measures.

14 – THE COMMISSIONS: PARTIES, AND PROCEDURES

Membership and procedures of Commissions, including decision-making, taking into account management needs.

15 – COMMISSIONS’ RULES OF PROCEDURE AND VOTING

Rules of procedure and voting in the Commissions.

16 - SECRETARY

The current and possible future functions of the Secretary.

17 – REGULATORY MEASURES

Regulatory measures to be taken under the Convention, and requirements for entry into force.

18 – DECISION-MAKING BY COUNCIL

As appropriate, binding decisions to be taken by the Council and requirements for entry into force.

19 – DUTIES OF PARTIES TO IMPLEMENT CONVENTION

The duties of Parties to implement the Convention and ensure compliance with it by their nationals.

20 - NON-PARTIES

As appropriate, the duties of non-Parties to ensure their nationals cooperate in the implementation of the Convention.

21 - DISPUTE SETTLEMENT

Parties are encouraged to settle their disputes by peaceful means, and mechanisms are described. As appropriate, any formal mechanisms for the resolution of disputes.

4.3.3.1 Indicative framework - options

As noted above, NASCO has a range of options for reviewing the indicative framework, one of which is to undertake a thorough review and revision of the Convention. Other options may also be identified, such as taking decisions on the areas that are most in need of revision and modernization. The form of decision would then need to be identified, for example, a decision by the Council or a legally-binding protocol.

Recommendations

34. It is recommended that the indicative framework for a NASCO Convention in section 4.3.3 be reviewed as a whole, and options for proceeding be considered, including identification of the mechanism and priority issues, as appropriate.

35. The Panel strongly recommends that the Convention be reviewed and revised along the lines shown in the indicative framework, but other mechanisms may be considered, in addition to or in the alternative, including agreement through binding protocols, Council decisions or other.

5. CONSERVATION AND MANAGEMENT

5.1 Introduction

The Atlantic salmon (*Salmo salar L.*), is sometimes referred to as the 'King of Fish'. Life for this regal fish begins in the gravels of rivers in Europe and North America from Portugal, Spain and New England (United States of America) in the south to Ungava Bay (Canada) and the Russian Federation in the north.

Spawning occurs in the autumn and winter with female salmon depositing between 1,000 - 2,000 eggs (ova) per kilogram of body weight into a nest (or redd) in the gravel. Hatching occurs the following spring and, initially, the young salmon, or alevins, are nourished by the yolk sac until they emerge from the gravel as fry to commence feeding. After the first year of life the young fish are known as parr.

The dominant life-cycle of the Atlantic salmon involves migration, which can cover thousands of miles to the ocean where salmon grow rapidly on the abundant food resources available in the oceans.

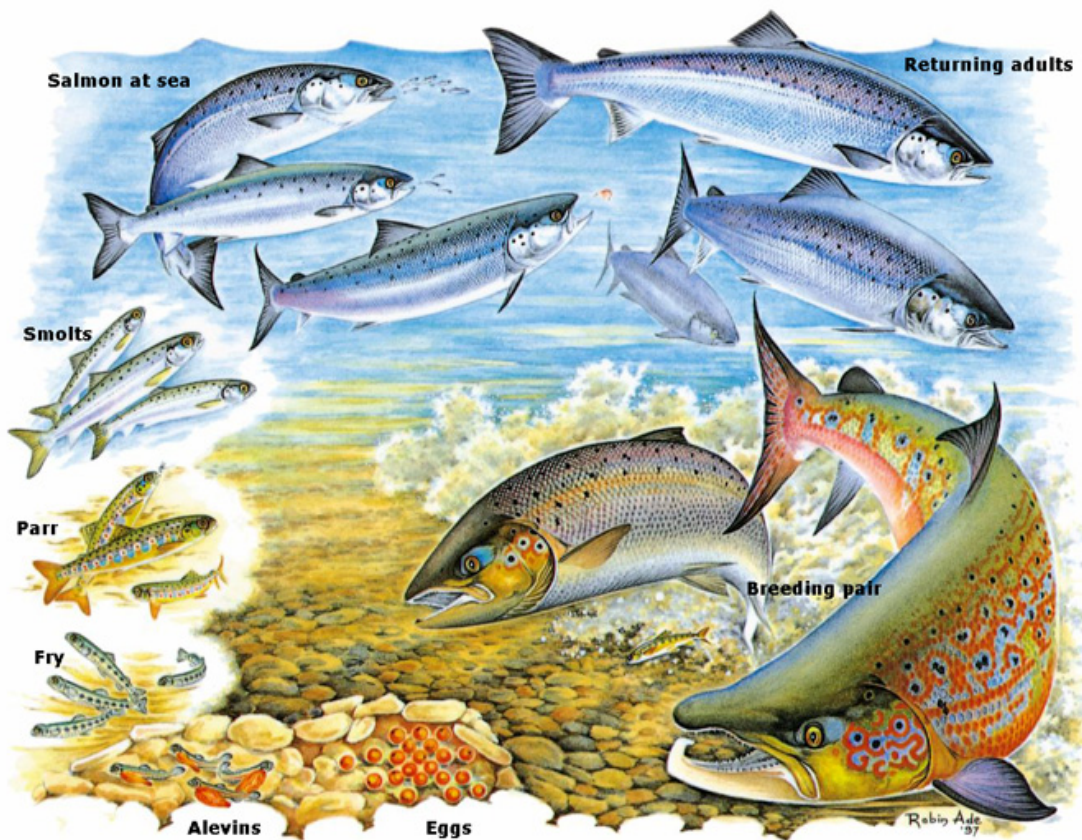


Figure 2: The life-cycle of the Atlantic salmon. Courtesy of the Atlantic Salmon Trust and Robin Ade <http://www.nasco.int/atlanticsalmon.html>.

As depicted in Figure 2 above, the life-cycle includes eggs, alevins, fry and parr in the rivers, smolt in the estuaries and the ocean, 1-sea winter (grilse) and multi sea winter fish in the ocean, and returning spawners in the rivers starting the cycle again. It is because of this life-cycle that rational management requires international cooperation and needs to address a number of different factors in several, very different habitats.

The oceanic migrations of Atlantic salmon in the North Atlantic, from North America and southern Europe to feeding areas at West Greenland and from Northern Europe to the Norwegian Sea are shown in the map below.

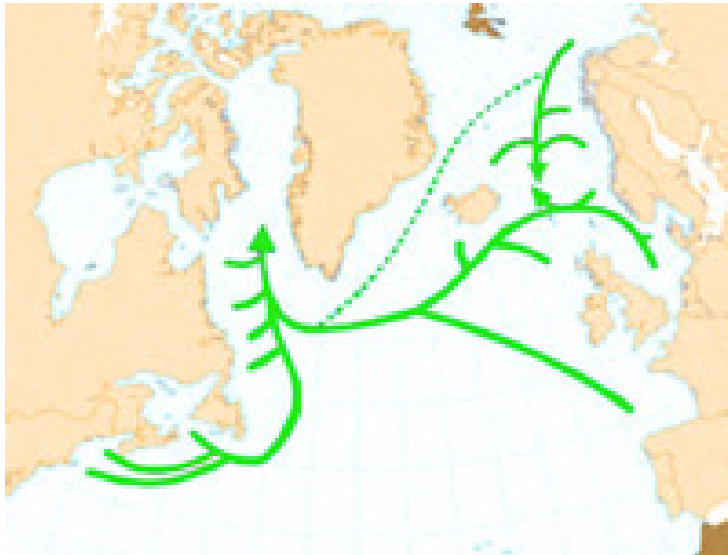


Figure 3: The oceanic migrations of Atlantic salmon. Keith, Chad at <http://www.nasco.int/atlanticsalmon.html>.

5.1.1 The NASCO approach to management

As will be described in more detail below, with respect to the distant-water salmon fisheries and in areas beyond fisheries jurisdiction, NASCO operates as other RFMOs in its approach to management. It adopts binding conservation and management measures for these fisheries with a focus on the fisheries at the Faroe Islands and Greenland. With respect to managing factors affecting other phases of the salmon life cycle, NASCO has agreed on a number of arrangements in the context of the 'Next Steps' process (see section 3).

In this regard, NASCO addresses all relevant aspects of management, including habitat protection and restoration, the impacts on wild stocks of salmon from aquaculture, rebuilding of stocks, social and economic issues and research at sea. The following NASCO agreements and guidelines are particularly relevant:

- The Agreement on Adoption of a Precautionary Approach, 1998
- The Minimum Standard for Catch Statistics, 1993
- The Decision Structure to Aid the Council and Commissions of NASCO and the relevant authorities in Implementing the Precautionary Approach to Management of North Atlantic Salmon Fisheries, 2002 (Decision Structure)
- Guiding Definitions of Terms used in Salmon Fisheries Management, 2000
- Resolution by the Parties to the Convention for the Conservation of Salmon in the North Atlantic Ocean to Minimise Impacts from Aquaculture, Introductions and Transfers, and Transgenics on the Wild Salmon Stocks, 2003
- Guidelines for Incorporating Social and Economic Factors in Decisions Under the Precautionary Approach, 2004
- Guidelines on the Use of Stock Rebuilding Programmes in the Context of the Precautionary Management of Salmon Stocks, 2004
- NASCO Guidelines for the Management of Salmon Fisheries 2009

- Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks, 2009
- Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat, 2010.

Reports by the NASCO Parties have described the application of the NASCO agreements and guidelines for review by the Organization.

5.2 Status of living marine resources - ICES Assessments

NASCO receives annual advice from ICES regarding the status of living marine resources in the area of the Convention, pursuant to articles 3.2 and 4.1(d) of the Convention and a Memorandum of Understanding. The advice is in response to an annual request for advice, which is drafted by the Standing Scientific Committee on and adopted by the Council at the NASCO annual meetings. The request for advice for 2011 is provided in Table 2 below:

Table 2: Request for advice to ICES

Request for advice to ICES (2011)⁶⁰
<p>A) With respect to Atlantic Salmon in the North Atlantic area:</p> <ul style="list-style-type: none"> i) Provide an overview of salmon catches and landings, including unreported catches by country and catch and release, and production of farmed and ranched Atlantic salmon in 2011; ii) Report on significant new or emerging threats to, or opportunities for, salmon conservation and management; iii) Provide a review of examples of successes and failures in wild salmon restoration and rehabilitation and develop a classification of activities which could be recommended under various conditions or threats to the persistence of populations; iv) Provide a compilation of tag releases by country in 2011; v) Identify relevant data deficiencies, monitoring needs and research requirements. <p>B) With respect to Atlantic salmon in the North-East Atlantic Commission area:</p> <ul style="list-style-type: none"> i) Describe the key events of the 2011 fisheries; ii) Review and report on the development of age-specific stock conservation limits; iii) Describe the status of the stocks; iv) Provide catch options or alternative management advice for 2012-2015, with an assessment of risks relative to the objective of exceeding stock conservation limits and advise on the implications of these options for stock rebuilding; v) Further develop a risk-based framework for the provision of catch advice for the Faroese salmon fishery, providing a clear indication of the management decisions required for implementation;

⁶⁰ The footnotes also include important additional elements.

- vi) Further develop a framework of indicators that could be used to identify any significant change in the assessments used in previously provided multi-annual management advice;
- vii) Provide advice on best practice for conducting monitoring surveys for the parasite *Gyrodactylus salaris*.

C) With respect to Atlantic salmon in the North American Commission area:

- i) Describe the key events of the 2011 fisheries (including the fishery at St Pierre and Miquelon);
- ii) Update age-specific stock conservation limits based on new information as available;
- iii) Describe the status of the stocks;
- iv) Provide catch options or alternative management advice for 2012-2015 with an assessment of risks relative to the objective of exceeding stock conservation limits and advise on the implications of these options for stock rebuilding.

D) With respect to Atlantic salmon in the West Greenland Commission area:

- i) Describe the key events of the 2011 fisheries;
- ii) Describe the status of the stocks;
- iii) Provide catch options or alternative management advice for 2012-2014 with an assessment of risk relative to the objective of exceeding stock conservation limits and advise on the implications of these options for stock rebuilding;
- iv) Update the framework of indicators used to identify any significant change in the previously provided multi-annual management advice;
- v) Advise on possible explanations for the variations in fishing patterns (e.g. effort, licenses and landings) observed in the Greenland fishery in recent years.

The catch advice given by ICES has not varied very much since 2006 (which did not deviate very much from catch advice in earlier years). The catch advice to a great extent focuses on the distant-water fisheries. It is given separately for the three Commissions, NAC, NEAC, and WGC. A summary of the overall situation is provided in the report of the ICES Working Group on North Atlantic Salmon,⁶¹ as described in Table 3 below.

Table 3: Executive Summary - Working Group on North Atlantic Salmon

Executive Summary - Working Group on North Atlantic Salmon (WGNAS)

WGNAS met to consider questions posed to ICES by NASCO. The advice, relative to the questions posed by NASCO, is seen below:

- In the North Atlantic, exploitation remains low and nominal catch of wild Atlantic

⁶¹ WGNAS 2011.

salmon in 2010 was 1589 t, the third lowest in the time series beginning in 1960.

- Northern Northeast Atlantic Commission stock complexes ([one sea winter] (1SW) and [multi-sea winter] (MSW) are at full reproductive capacity prior to the commencement of distant water fisheries.
- Southern Northeast Atlantic Commission stock complexes (1SW and MSW) are at full reproductive capacity prior to the commencement of distant water fisheries.
- Prior to any distant water fisheries, the 1SW age group in the Northern NEAC and both age groups in the Southern NEAC stock complexes are at risk of suffering reduced reproductive capacity for 2011 to 2014. The MSW age group from the Northern NEAC complex is at full reproductive capacity for 2011 and 2012 and at risk of suffering reduced reproductive capacity in 2013 and 2014.
- Marine survival indices in the North Atlantic have declined and remain low. Factors other than marine fisheries, acting in freshwater and in the ocean in both NAC and NEAC (marine mortality, fish passage, water quality), are contributing to continued low abundance of wild Atlantic salmon.
- The Working Group has provided a work example of the catch advice framework for the Faroese Fishery. Further, a proposed Framework of Indicator framework for the Faroese fishery is provided.

The report of the ICES working group is reviewed and considered by the ICES Advisory Committee (ACOM) and the formal advice is issued in the reports of this Committee.

As noted above, advice is given individually for the salmon stocks of North America, salmon stocks in the North East Atlantic and salmon stocks at West Greenland. For all three areas the considerations of biology, environmental influence on the stock, impacts of the fisheries on the ecosystem are very similar. It is noted, however, that according to ICES most recent advice, environmental conditions in both freshwater and marine environments have a marked effect on the status of salmon stocks. Across the North Atlantic, a range of problems in the freshwater environment play a significant role in explaining the poor status of stocks. In many cases river damming and habitat deterioration have had a devastating effect on freshwater environmental conditions. In the marine environment, return rates of adult salmon have declined through the 1980s and are now at the lowest levels in the time-series for some stocks, even after closure of marine fisheries. Climatic factors modifying ecosystem conditions and predator fields of salmon at sea are considered to be the main contributory factors to lower productivity, which is expressed almost entirely in terms of lower marine survival.

5.2.1 The NASCO Atlantic Salmon rivers database

A major advance in the protection and restoration of habitat has been the establishment by NASCO of the NASCO Atlantic Salmon Rivers Database, which provides information on river location and characteristics, stock status, and impact factors and allows information to be viewed interactively on maps and reports to be generated.

According to the NASCO Atlantic Salmon rivers data base, there are more than 2500 salmon rivers in the area of the Convention.⁶² The database has been analysed and the status of the rivers assessed with respect to their status, according to grouping.⁶³ Not all jurisdictions have as yet provided information. The result is as follows:

Heading	Numbers	%
Total No. of rivers reported to date	2046	
Stock status is as follows for	2004	
Not threatened with loss	1077	53.7
Threatened with loss	321	16.0
Lost	207	10.3
Restored	29	1.4
Unknown	368	18.4
Nor present, but potential	2	0.1

Analysis

The request for advice from NASCO to ICES may be rather restrictive and may not cover all impacts on the stock status of the Atlantic salmon. It is clearly seen that the catch advice focuses on the possible fisheries, the Faroese salmon fishery and the West Greenland fisheries and their impact on the stocks. These fisheries have been virtually non-existent since the early nineties. Very little is requested with respect to the stock situation in the rivers and in estuarine, near shore and off shore areas and this shows up in the ICES report.

For all three Commission areas, similar quality consideration and scientific basis were listed by ICES in the stock assessments. ICES notes that uncertainties in input variables to the stock status and stock forecast models were incorporated in the assessment. Catch reporting was also considered to be incomplete. In terms of the scientific basis for assessments, ICES recorded that assessments were carried out using common input variables across stock complexes in NEAC and NAC. In addition, run reconstruction models and Bayesian forecasts were performed taking into account uncertainties in the data.

The use of Bayesian forecasts raises presentational problems. It is very difficult to evaluate the technical processes behind the forecasts (handling of bias) and therefore transparency is reduced.

⁶² <http://www.nasco.int/RiversDatabase.aspx>

⁶³ River Categories: Lost - Rivers in which there is no natural or maintained stock of salmon but which are known to have contained salmon in the past; Maintained - Rivers in which there is no natural stock of salmon, which are known to have contained salmon in the past, but in which a salmon stock is now only maintained through human intervention; Restored - Rivers in which the natural stock of salmon is known to have been lost in the past but in which there is now a self-sustaining stock of salmon as a result of restoration efforts or natural recolonization; Threatened With Loss - Rivers in which there is a threat to the natural stock of salmon which would lead to loss of the stock unless the factor(s) causing the threat is(are) removed; Not Threatened With Loss - Rivers in which the natural salmon stocks are not considered to be threatened with loss; Unknown - Rivers in which there is no information available as to whether or not it contains a salmon stock; Not Present But Potential - Rivers in which it is believed there has never been a salmon stock but which it is believed could support salmon if, for example, natural barriers to migration were removed.

The river database summarises the overall situation of the river stocks. It is not easy to reconcile this information with the ICES advice. In essence the database classifies only just above half of the river stocks as “not threatened with loss”. This seems to indicate a more serious situation in the rivers than indicated by the ICES Executive Summary.

Recommendations

1. The information in the river database should be compared with other information on the state of the river systems, for example, the annual ICES advice and the information on habitat estimates.

5.3 The precautionary approach

5.3.1 Background

There is an obvious link between the sustainable development of fisheries and their precautionary management. In 1988, the 94th Session of the FAO Council agreed that “Sustainable development is the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such development conserves land, water, plant genetic resources, is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable”.⁶⁴

This definition applies well to sustainable fisheries development and management. However, the strategies required to ensure a high degree of sustainability in human use of natural renewable resources systems are not easy to conceive and implement for at least two reasons:

- (a) our insufficient understanding of the laws governing these systems and the inherent uncertainty about the consequences of our decisions, and
- (b) the inadequate nature of our institutions and controls, particularly on access to resources.

It is generally agreed that the inadequacy in management results essentially from the open access nature of the fisheries and the lack of effective mechanisms to directly control fishing effort levels in the absence of an explicit agreement on the allocation of resources between users. In addition, the problem lies, partly, in the non-recognition of the high levels of

⁶⁴ Also see FAO Fisheries Technical Paper 350/2 in which the precautionary approach is reviewed based on the Technical Consultation on the Precautionary Approach to Capture Fisheries (Including Species Introductions) Lysekil, Sweden, 6–13 June 1995, the Precautionary Approach, launched as the Precautionary Principle in UNCED, Agenda 21, (RIO 1992 summit. <http://www.fao.org/DOCREP/003/W1238E/W1238E01.htm#ch1> Serge Garcia in Part 2: Scientific papers <http://www.fao.org/DOCREP/003/W1238E/W1238E01.htm#ch1>).

uncertainty that characterize fisheries and the related lack of precaution in most management regimes.

The review of the state of world fishery resources undertaken by FAO and the global analysis available in the FAO Report on the State of World Fisheries and Aquaculture (SOFIA) indicates that, although management practice has favourably evolved during the last half century, it has tended to lag behind management theory and that progress towards sustainability, since the first FAO Technical Committee on Fisheries in 1945, has been insufficient.⁶⁵ It is now recognized that the biomass of many important fish stocks is close to or even below the level that could produce the maximum sustainable yield (MSY), leading to resource instability and economic losses. In many areas, the present situation is one of resource erosion, economic losses and social dislocations that illustrate the fisheries management risk and reflect behaviour which in the last decades has been neither sufficiently responsible nor precautionary.⁶⁶

The increased recognition that conventional fishery management needed to be improved has been accompanied by a growing concern for environmental management, particularly as a result of a number of international conferences starting with the World Conference on Human Environment.

5.3.2 NASCO's interpretation of the precautionary approach

NASCO and its Parties have agreed to adopt and apply the precautionary approach to the conservation, management and exploitation of salmon in order to protect the resource and preserve the environments in which it lives. Accordingly, their objective for the management of salmon fisheries is to promote and protect the diversity and abundance of salmon stocks. In support of this objective, NASCO has developed a number of guidelines and agreements. Where these were developed prior to 1998 they were reviewed and revised to ensure consistency with the precautionary approach.

The Agreement on Adoption of the Precautionary Approach⁶⁷ states that an objective for the management of salmon fisheries for NASCO and its Parties is to promote the diversity and abundance of salmon stocks and that for this purpose, management measures, taking account of uncertainty, should be aimed at maintaining all stocks above their conservation limit taking into account the best available information, socio-economic factors and other factors identified in article 9 of the Convention. It further states that salmon fishery management requires at least the following:

- That stocks be maintained above their conservation limit by the use of management targets;
- That conservation limits and management targets be set for each river and combined as appropriate for the management of different stock groupings developed by managers;

⁶⁵ Garcia 1996 in Fisheries Technical Paper 350/2.

⁶⁶ Garcia, 1992; FAO, 1993; Garcia and Newton, 1994; 1995.

⁶⁷ CNL(98)46.

- The prior identification of undesirable outcomes including biological and socio-economic factors;
- That account be taken at each stage of the risks of not achieving the fisheries management objectives by considering uncertainty in the current state of the stocks, in biological reference points and fishery management capabilities;
- The formulation of pre-agreed management actions in the form of procedures to be applied over a range of stock conditions;
- Assessment of the effectiveness of management actions in all salmon fisheries; and
- Stock rebuilding programmes to be developed for stocks that are below their conservation limits.

Pursuant to this Agreement, conservation limits (CLs) and management targets (MTs) are to be set for each river. NASCO has defined CL as the undesirable spawning stock level at which recruitment would decline significantly. Both NASCO and ICES define the CL as the number of spawners that will achieve long-term average maximum sustainable yield. MT is the stock level employed by managers in order to achieve the objective of exceeding the conservation limit for the desired proportion of years taking into account uncertainties in the data.

With regard to stock rebuilding programmes the Council has developed guidance on the process of establishing stock rebuilding programmes, identified what such plans might contain, and provided a link among the various guidance documents developed by NASCO in relation to management of fisheries, habitat protection and restoration and aquaculture and related activities.

In 2002, the NASCO Council also agreed on a Decision Structure to aid the Council and Commissions and the Parties in implementing the precautionary approach to management of salmon fisheries.⁶⁸ The Decision Structure was developed by the Council to assist with the application of the precautionary approach to the management of salmon fisheries and to provide a basis for more consistent approaches to the management of exploitation throughout the North Atlantic range of salmon. It proposes the use of reference points such as CLs and MLs, or other indicators of stock status, to trigger management actions to address any failure in abundance or diversity.

It was intended that the Decision Structure be widely applied by managers with stakeholders on salmon rivers. In applying the Decision Structure, management decisions should be taken in accordance with an assessment of risk, such that, in the face of uncertainty, there is a low risk to abundance and diversity of the stock(s). The probability of achieving the management goals should be high. The results of using the Decision Structure is monitored and evaluated to ensure that the actions taken in managing salmon fisheries are consistent with the precautionary approach. The Parties have agreed to report annually to NASCO on their experiences in applying the Decision Structure and on the extent of its implementation.

⁶⁸ CNL31.332.

Further information on the ways in which NASCO addresses the precautionary approach is in section 5.8. Reference is made to the precautionary approach repeatedly in NASCO guidelines and plans, for example in the introduction to the NASCO Guidelines for the Management of Salmon Fisheries, in the preface of the Williamsburg Resolution, in the preface of NASCO Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat, and in the introduction to the NINA Special Report 34 on the Interactions Between Aquaculture and Wild Stocks of Atlantic Salmon and other Diadromous Fish Species.⁶⁹

Analysis

The implementation of the precautionary approach by NASCO is very much in line with the approaches taken in marine fisheries, demersal and pelagic fisheries. The use of the limit reference point S_{lim} , a limit of the spawning stock, which should be avoided with a high probability is similar to the application of the precautionary approach in other fisheries.

The Decision Structure provides a basis for more consistent approaches to the management of exploitation throughout the North Atlantic range of the species. It relies on the use of reference points such as CLs (i.e. the number of spawning salmon below which the stock would decline markedly) and MTs, or other indicators of stock status, to trigger management actions to address any failure in abundance or diversity.

It is difficult to determine if precautionary approaches are fairly distributed on measures dealing with the various phases of salmon life history. Using precautionary limit reference points, S_{lim} , with a buffer to reduce the probability of bringing the stocks below certain limits surely applies to the advice given for the fisheries in the high seas, but is not easy to spot in the management of rivers, estuaries and near and offshore areas.

Recommendation

2. NASCO should ensure that the precautionary approach is used to the same extent in managing all impacts of human activity on the full life-cycle of salmon in rivers, estuaries, coastal areas and the open ocean.

5.4 The ecosystem approach

5.4.1 Background

It is recognised that in many capture fisheries it is difficult to integrate new ecosystem objectives with other social objectives relating to the economic viability of the fishing industry and the social utility of marine fisheries.

⁶⁹ See Hansen, L.P. & Windsor, M. 2006, Interactions between aquaculture and wild stocks of Atlantic salmon and other diadromous fish species: science and management, challenges and solutions, NINA Special Report 34, 74 pp. Trondheim, October, 2006.

The Johannesburg Plan of Implementation adopted by the World Summit on Sustainable Development adopted a number of recommendations to achieve sustainable fisheries. In particular, the WSSD-JPOI required action at all levels in order to maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis, where possible not later than 2015. Further, the WSSD-JPOI encouraged the application by 2010 of the ecosystem approach and recommended the development and use of diverse approaches and tools, including the ecosystem approach.

FAO has issued guidelines and advocates incremental integration of environment concerns into existing fishery management. Resolutions of the General Assembly on sustainable fisheries have similarly called for implementation of the ecosystem approach to management measures (see section 4).⁷⁰

One useful definition of the ecosystem approach is provided by the Assessment Report of the Intermediate Ministerial Meeting of the North Sea Conference, on the Integration of Fisheries and Environmental Issues, Bergen 1997, which states:

“An ecosystem approach involves considering all the physical, chemical and biological variables within an ecosystem. In the management of living resources this means that decisions are based on the best available scientific knowledge of the functions of the ecosystem, including the interdependence of species and the interaction between species (food chains) and the abiotic environment, as well as knowledge of the temporal development of the ecosystem. It could, therefore, imply a widening of the multispecies approach, currently used in fisheries, to encompass not only fish but also other organisms, which directly or indirectly depend on fish or on which fish depend, as well as other significant biotic and abiotic environmental factors.”⁷¹

Pope and Symes also give a full description of the history of ecosystem based management of aquatic environments.⁷² They note that this is a relatively new concept which is rapidly gaining wider recognition. A number of countries have already developed initiatives to consider ecosystem based management approaches for the marine environment.

Pope and Symes present the following Table 4 on the scientific and management possibilities of implementing various ecosystem objectives and the corresponding estimated reduction in fishing effort:

⁷⁰ Also see, Brian C. Spence et al., 1996, An Ecosystem Approach to Salmonid Conservation, at: <http://www.nwr.noaa.gov>.

⁷¹ M. Svelle et al; 1997. Assessment Report on Fisheries and Fisheries Related Species and Habitats Issues. Oslo: Ministry of the Environment.

⁷² Pope, J. and D. Symes, 2000, An Ecosystem Based Approach to the Common Fisheries Policy: Defining the Goals Report to the 2002 review of the Common Fisheries Policy, citeseerx.ist.psu.edu.

Table 4: Scientific and management possibilities of implementing ecosystem objectives

Scientific and management possibilities of implementing ecosystem objectives and the corresponding estimated reduction in fishing effort (Pope and Symes)			
Objective	Scientific Feasibility*	Management Feasibility*	Estimated fishing effort reduction (%)
1. Understanding the consequences	9	10	0
2. Ecological indicators	6	6	20
3. Essential fish habitat	6	7	0
4. Rational exploitation	8	7	30
5. Ecosystem limit reference points	8	7	>30
6. Maximum economic yield of the ecosystem	4	4	70
7. Ecosystem target reference points	6	5	60
8. Optimum size spectra	5	6	variable
9. Optimum harvest of trophic levels	6	5	variable
10. Restoring the integrity of the ecosystem	3	3	variable

*notional scores out of 10,

5.4.2 NASCO's interpretation of the ecosystem approach

The ecosystem approach is highly relevant to the management of Atlantic salmon stocks, which have a complex life-cycle and are vulnerable to threats at each stage of their development, covering spawning areas, juvenile habitat, migration routes and feeding areas in the ocean. A major implication of this approach is that all the complex interactions from activities - such as water abstraction, agricultural practice, industrial processes, urban run-off, hydro-power generation, angling, aquaculture, net fishing and so on, – must be addressed by NASCO and its Parties.

The ecosystem approach is particularly relevant to NASCO in terms of its international role in addressing the impact of fishing; not just fishing targeted on salmon, but fishing for other species in areas of salmon migration or high seas feeding grounds.

It is noted that there is no reference in any of the documents reviewed by the Panel to the WSSD-JPOI commitment of restoring all fish stocks back to the MSY level by 2015.

Analysis

NASCO to a large extent has a mandate that covers both that of traditional RFMOs and that of Regional Seas Programmes, such as OSPAR. This mandate is not founded in the NASCO Convention, which is largely focused on protecting Atlantic salmon from targeted fisheries in areas beyond fisheries jurisdiction and ensuring salmon catches primarily occur within the 12-nautical-mile territorial seas.

But NASCO has devoted much effort in implementing the ecosystem approach and monitoring the restoration of wild salmon habitats and external threats to the salmon stocks from other users of the habitats prior to and as a result of the 'Next Steps' process. Recovery of endangered salmon populations has been left mainly to coastal States.

Further information on the ways in which NASCO is dealing with the various impacts of human activities, to be taken into account in the ecosystem approach, are described in section 5.10 on external impacts.

Recommendation

3. NASCO should ensure that the WSSD-JPOI commitment to maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis, where possible not later than 2015, is taken into account, including in the context of the 'Next Steps' process.

5.5 Data collection and sharing

Pursuant to article 15 of the Convention, each Party is required to:

- Provide to the Council available catch statistics for salmon stocks taken in its rivers and area of fisheries jurisdiction at such intervals as the Council may determine;
- Compile and provide to the Council such other statistics for salmon stocks subject to this Convention in its rivers and area of fisheries jurisdiction as required by the Council; and
- Provide the Council with any other available scientific and statistical information which it requires for the purposes of this Convention.

In this regard, the Minimum Standard for Catch Statistics states that information on fishing effort should, wherever possible, be obtained for all components of the salmon fisheries. In addition, catch statistics should:

- Include catches from all components of the salmon fisheries where these are retained;
- Include returns to ranching units;
- Include both the number and weight of salmon;

- Be differentiated into sea-age class or alternatively into grilse and multi-sea-winter salmon;
- Differentiate, where possible, between wild fish and those which have escaped from fish farms; and
- Include salmon caught in non-salmon gear where retention of such fish is legal.

The Minimum Standard for Catch Statistics further encourages studies to assess non-catch fishing mortality in both salmon directed and non-directed gears in particular unreported catches, and measures to reduce the level of non-catch fishing mortality (in both directed and non-directed gears) in particular unreported catches.

The repositories for salmon data are national databases. These data are made available to ICES and the ICES Working Group. ICES has a tradition of extensive data sharing in the North Atlantic area.

ICES has recommended that Greenland obtains additional information from fishers including catch site, catch date, numbers of nets, net dimensions, and numbers of hours the nets were fished, as well as enhanced sampling programmes. ICES has also recommended the application of enhanced sampling programmes in some years.

As part of the 'Next Steps' process it has been suggested that Greenland improve its monitoring and reporting, for example, by implementing a logbook program or limiting the number of licenses. The implementation of these recommendations should be assessed in subsequent reporting. However, as the Greenland fisheries is limited to a small subsistence fishery, due to NASCO regulatory measures, the lack of data should not be a hindrance to assessing the situation the West Greenland area.

Analysis

Data problems have not been raised by WGNAS, except for data on sea mortality. The mortality in the sea was addressed in the NASCO-led SALSEA Programme.

One NGO has drawn attention to the lack of data on what happens to young salmon at the outset of their migratory journeys through the coastal waters of Norway, Scotland and Ireland.⁷³

Recommendation

4. Noting that NASCO has, in the SALSEA Programme, addressed the problem of estimating sea mortality, it is important to cover the sea areas stretching from estuaries to the high seas, the phase of the life cycle where the salmon leaves natal waters, to the same extent as other phases of the life cycle.

⁷³ Federation of Irish Salmon & Sea Trout Anglers; SALSEA – The Salmon at Sea Story Decoded: An NGO's Overview, March 28, 2012.

5.6 Quality and provision of scientific advice

Scientific advice has been provided by ICES as described above. Where there has been a need to bring together new knowledge on specific issues, international symposia and workshops have been convened. The topics addressed have included the impacts of aquaculture and introductions and transfers, fishing for salmon in international waters, quota compensation payments, and the precautionary approach. In fact, the information derived from symposia held in 1990, 1997 and 2005 formed the basis for the development of NASCO resolutions relating to aquaculture, introductions and transfers.

The annual request to ICES has evolved over the years from focussing on advice relevant to fisheries management to advice relating to the broader areas of NASCO's work. In the period 1984-1991, the requests to ICES were formulated by *ad hoc* groups of scientists meeting in the margins of the annual meetings. Since 1992, in order to involve managers in the formulation of the request to ICES for advice, a Standing Scientific Committee has met annually under the Chairmanship of the Assistant Secretary. Memoranda of Understanding between NASCO and ICES have also formalised the working arrangements and detailed the financial aspects.⁷⁴

In recent years, the request to ICES has comprised a number of core recurring elements as follows:

- An overview of catches and landings, including unreported catches, and production of farmed and ranched salmon;
- Key events in the fisheries including information on non-catch fishing mortality and by-catch;
- The status of stocks;
- Catch options with an assessment of risks relative to the objective of exceeding stock conservation limits and the implications for stock rebuilding;
- Significant new or emerging threats to, or opportunities for, salmon conservation and management; and
- Identification of data deficiencies, monitoring needs and research requirements.

Concerns have been expressed by ICES and the NASCO Fisheries Management Review Group on the continuation of mixed-stock fisheries, which exploit more than one salmon stock. The ICES advice states that these fisheries present particular threats to stock status as they cannot target only stocks that are at full reproductive capacity if there are contributing stocks that are below their conservation limits. These fisheries predominantly operate in coastal areas and the NASCO request for advice seeks the partitioning of the catches according to whether the catch is taken in coastal, estuarine, or riverine areas. It should be noted that not all Parties and jurisdictions have established conservation limits.

There is variability in the distribution of the catch among individual countries. In most countries, the majority of the catch is now taken in freshwater; the proportion of the catch taken in coastal waters having declined over the last five years. Nonetheless, in 2010, ICES

⁷⁴ See www.nasco.int/scientificadvice.html.

indicated that 30% of the catch in the NEAC area and 6% of the catch in the NAC area was taken in coastal waters.

In the context of the 'Next Steps' process, it has been recognised that both ICES and NASCO would be more effective and efficient if multi-annual advice could be provided and multi-annual regulatory measures adopted. Therefore, since 2005, ICES has been requested to provide multi-annual catch advice for all three Commissions. To date, multi-annual regulatory measures have only been adopted in WGC. A framework of indicators is used in WGC in the years when there has not been a full scientific assessment.

In 2001, the Council established the IASRB, formerly the International Cooperative Salmon Research Board, to promote collaboration and cooperation on research into the causes of marine mortality of salmon and the opportunities to counteract this mortality. In 2005, having established and reviewed an inventory of research related to salmon mortality at sea that is updated annually,⁷⁵ NASCO and IASRB agreed that its immediate research priority would be studies of the distribution and migration of salmon at sea in relation to predation and feeding opportunities.

NASCO has also developed and implemented the SALSEA Programme through a public-private partnership, which is in an innovative programme of research on salmon at sea.

In 2010, NASCO requested ICES to identify relevant data deficiencies, monitoring needs and research requirements. In response to this request the WGNAS recommended that it should meet in 2012 to address questions posed by ICES and NASCO. It also developed its own list of recommendations for consideration in 2012.⁷⁶

In the meantime, an ICES group reviewing the work of WGNAS stated with respect to the 2011 assessment:

The Working Group continues to produce an excellent assessment of Atlantic salmon populations in the North Atlantic, while at the same time advancing the methodologies used in the assessment of populations of species with short life-spans, especially those with a heavy dependence on environmental effects. These approaches should be of utility to other researchers working within the ICES community and worldwide as well.

Our concerns continue to be with the mechanistic underpinnings of the forecast model used to estimate stock abundances in both North America and Europe. These concerns center on the issue of representing stock effects on recruitment as a compensatory function and adding environmental indices to model the effects of environment on post-smolt survival. Both of these concepts can be supported with data presented in the [WGNAS] report and from the peer review literature. The Review Group is concerned that the [WGNAS] needs additional time and flexibility in

⁷⁵ See www.nasco.int/sas/research.htm.

⁷⁶ Report of the Working Group on North Atlantic Salmon (WGNAS), 22–31 March 2011, Copenhagen, Denmark, Annex 8.

respect to its workload to make progress on critical issues related to model extensions to reflect the effect of climate variation on salmon stocks.

Analysis

The Parties have not identified major problems with respect to the quality and provision of scientific advice. The relationship with ICES is now considered to be generally working well.

NASCO is very focused on the scientific basis for its management. The arrangement with ICES ensures that salmon scientists of the Parties can cooperate and bring together necessary data and expertise to respond to the requests of NASCO.

The SALSEA Programme is innovative and has filled gaps in data available to the scientists.

The ICES Review Group that reviews the work of WGNAS is appreciative of its work, but also draws attention to some problems in forecasting estimates of stock abundance and points out that environmental indices should be added to model the effects on the crucial post-smolt survival estimates.

Recommendations

5. WGNAS should heed the advice given by the ICES Review Group, especially to estimate post-smolt survival.

6. The issues and recommendations raised by WGNAS in 2011 should be addressed when it meets in 2012.

5.7 Adoption of conservation and management measures

The early focus of NASCO's work was very much on the distant-water fisheries at West Greenland and the Faroe Islands. In spite of differences in interpretation, regulatory measures or decisions have been agreed covering each of the 27 years since NASCO's establishment with the exception of four years for the West Greenland fishery and one year for the Faroese fishery.

Because of declining abundance, linked to increased mortality of salmon at sea, the catch options or other catch advice provided by ICES have been unchanged for many years. Since 1997, the combined catch in these fisheries under NASCO measures has been under 50 tonnes. Measures that have been adopted have included annual and multi-annual measures and decisions.

In adopting measures, the Convention requires the Commissions to take into account a number of factors in establishing regulatory measures (article 9), as follows:

- The best available information, including advice from ICES and other appropriate scientific organizations;
- Measures taken and other factors, both inside and outside the Commission area, that affect the salmon stocks concerned;
- The efforts of States of origin to implement and enforce measures for the conservation, restoration, enhancement and rational management of salmon stocks in their rivers and areas of fisheries jurisdiction;
- The extent to which the salmon stocks concerned feed in the areas of fisheries jurisdiction of the respective Parties;
- The relative effects of harvesting salmon at different stages of their migration routes;
- The contribution of Parties other than States of origin to the conservation of salmon stocks which migrate into their areas of fisheries jurisdiction by limiting their catches of such stocks or by other measures; and
- The interests of communities which are particularly dependent on salmon fisheries.

In WGC, multi-annual regulatory measures have been adopted, based on advice received from ICES. On the basis of this advice, the catch at West Greenland has been restricted to an internal-use fishery since 1998 (with the exception of 2001 and 2002), which has been estimated to be 20 tonnes. The current internal-use fishery has been controlled through a combination of monitoring of estimates of annual catches by Greenland and a sampling programme.

To ensure that there has not been a significant change in stock status that would change the catch advice during the multi-annual measure, a framework of indicators is used in the years when there is not a full scientific assessment, which includes annual data on stock status for around 30 indicators. The Commission agrees annually on a sampling programme for the West Greenland fishery involving participation by scientists from the European Union, Canada, the United States of America and Greenland.

With respect to NEAC, since 1999, no quota has been set but the Commission has agreed decisions that require that the fishery is managed on the basis of the scientific advice from ICES, in a precautionary manner and with a view to sustainability. In effect, there has been no commercial fishery since the early nineties. These decisions have worked well in conservation terms in that no commercial salmon fishery has taken place at the Faroe Islands since the early 1990's.

ICES has not yet been able to provide quantitative advice because of a lack of a risk framework similar to that used for the West Greenland fishery. The development of such a risk framework requires feedback from the NEAC on the salmon stock groupings to be employed; the management objectives for each grouping and a sharing agreement. There have been initial consultations on this issue and a progress report is available.⁷⁷

While multi-annual catch advice is provided by ICES, the absence of a risk framework and a framework of indicators means that multi-annual regulatory measures have not been

⁷⁷ See <http://www.nasco.int/fisheries.html>.

agreed. ICES has, however, made progress on these issues and it seems likely that both frameworks will be available soon.

5.7.1 'Next Steps' process

As part of the 'Next Steps' process, NASCO identified the management of salmon fisheries as one of the key challenges facing the Organization (also see section 3).⁷⁸ The overall goal of NASCO and its Parties in this regard was to promote the diversity and abundance of salmon stocks and to maintain all stocks above their conservation limits, as provided in the Action Plan for Application of the Precautionary Approach.⁷⁹ The key issues identified by the Organization in relation to the management of salmon fisheries were to: (i) maintain an effective prohibition on fishing for salmon beyond areas of national jurisdiction; (ii) further improve the 'fairness' and balance in management of distant-water fisheries; (iii) explore possibilities for longer-term regulatory measures; (iv) exchange information and transfer expertise and knowledge between Parties and between NGOs and the authorities; and (v) further develop the knowledge basis for fisheries regulations.

In order to address this challenge, the Parties were requested to submit an IP in 2007 detailing the measures to be taken over a five year period with regard to the management of salmon fisheries, among other issues. In 2008 and 2009, NASCO also conducted a review of the management of salmon fisheries based on FARs prepared by the Parties.⁸⁰

The aim of the FARs was to provide a more in-depth assessment of the measures already in place that address NASCO agreements and guidelines on fisheries management; further actions proposed within their IP to meet the NASCO agreements and guidelines; and progress with implementing these actions. The FARs were intended to provide the basis for evaluating the extent to which the fisheries management approach was meeting, or expected to meet, NASCO's goals to promote the diversity and abundance of salmon stocks and maintain all stocks above their conservation limits.

5.7.2 Consistency of fisheries management efforts with NASCO agreements and guidelines

In 2008 and 2009, the Fisheries Management Focus Area Review Group reviewed the FARs to determine consistency of fisheries management efforts made by the Parties with NASCO's agreements and guidelines. A number of specific observations were made with regard to salmon management in jurisdictions that did not submit a FAR, including some known to have mixed stock fisheries.

The FAR Review Group found the majority of the FARs failed to address a number of aspects of fishery management in detail, which made it difficult to conduct a comprehensive evaluation of the consistency of these aspects with NASCO Agreements. Although lack of information was an issue, for most Parties additional actions were required to ensure

⁷⁸ CNL(05)49.

⁷⁹ CNL(99)48.

⁸⁰ CNL(08)13 and CNL(09)11.

consistency with NASCO's agreements and guidelines. In particular, information on the interplay between stock conservation needs and incorporation of social and economic factors in decision-making, for both single and mixed-stock fisheries, would be important.

More specifically, the FAR Review Group concluded that:

- Most FARs failed to provide a clear decision structure or alternative description of the decision-making processes for fisheries management, including with regard to the formulation of pre-agreed management actions in the form of procedures to be applied over a range of stock conditions.
- Most FARs failed to provide a clear indication of how socio-economic factors were incorporated into decisions, and in particular how decisions were taken to permit fishing on stocks when they were below their reference point.
- The FARs provided very variable responses on the information available on stock diversity, the extent to which fishery selectivity is taken into account and the measures taken to protect separate stock components;
- Most FARs failed to address the NASCO Decision Structure, which requires that consideration be given to whether the stocks are threatened by factors other than fisheries (e.g. habitat degradation, diseases and parasites); and
- While many of the FARs provided information on routine stock monitoring programmes, they generally failed to describe programmes to assess the effectiveness of their management measures.

Based on these assessments, the FAR Review Group determined that additional guidance should be developed to assist the Parties in making further progress in implementing NASCO's agreements and guidelines, to provide a basis for future exchange of information and to assist with future reporting. In regard to management of salmon fisheries, NASCO subsequently adopted Guidelines for the Management of Salmon Fisheries.⁸¹

Analysis

The findings of the Review Group show that in a number of instances the Parties did not meet the requirements the Agreement on Adoption of a Precautionary Approach and NASCO's objective for fishery management to promote the abundance and diversity of salmon stocks. The FAR Review Group also noted that NASCO's agreements and guidelines did not make it clear how fishery management decisions were to be taken when there were conflicts between social and economic and conservation issues.

Through the 'Next Steps' process, NASCO has attempted to address some of the ambiguities or inconsistencies in some of its instruments relating to fisheries management.

⁸¹ CNL(09)43.

Binding regulatory measures have only been adopted by NASCO for the distant-water fisheries in Faroese and West Greenland waters. No binding measures have been agreed on river or coastal fisheries, but are dealt with in non-binding agreements and guidelines.

There have been problems implementing the NASCO agreements and guidelines. An effective balance has not been attained in NASCO between Convention-based prohibitions with respect to fisheries and decisions taken in the context of the 'Next Steps' process aimed at measures in the rivers, estuaries and coastal areas as well as other activities in these areas impacting on salmon. This imbalance is a matter of deep concern.

Recommendations

7. Through the 'Next Steps' process, NASCO has addressed some of the ambiguities or inconsistencies in its instruments relating to fisheries management. In future reporting, information should be provided by the Parties on the interplay between stock conservation needs and incorporation of social and economic factors in decision-making, for both single and mixed-stock fisheries. In particular, clear indications should be given of how decisions were taken to permit exploitation of stocks known to be below their reference points, where information on stock status was lacking, and the consequences of these decisions for stock rebuilding.

8. The Parties are encouraged to report on issues relating to the management of salmon fisheries in a prompt and timely fashion.

9. As recommended by the Review Group, there is a need for further progress to be made in the management of salmon fisheries as part of the next cycle of the 'Next Steps' process.

5.8 Habitat protection, restoration and enhancement

Given the migratory nature of salmon, the degradation of their habitat can have a significant impact on salmon stocks, including from physical, chemical and biological factors, such as hydro-electric dams, gravel abstraction, canalization, water abstraction and pollution. NASCO has adopted and applied a precautionary approach to the conservation, management and exploitation of salmon in order to protect the resource and preserve its habitat.

NASCO has adopted a Plan of Action for the Application of the Precautionary Approach to the Protection and Restoration of Atlantic Salmon Habitat.⁸² It has also developed Guidelines for Incorporating Social and Economic Factors in Decisions under the Precautionary Approach,⁸³ and Guidelines on the Use of Stock Rebuilding Programmes in the Context of the Precautionary Management of Salmon Stocks.⁸⁴

⁸² CNL(01)51.

⁸³ CNL(04)57.

⁸⁴ CNL(04)55.

The Plan of Action provides a framework for use by the appropriate jurisdictions (national, regional and local), that have responsibilities for activities involving salmon habitat. It sets out the guiding principles to support application of the precautionary approach to habitat protection and restoration. It also calls for the development of a comprehensive salmon habitat protection and restoration plan, including a general strategy for the protection of habitat for all salmon rivers including measures to minimise impacts and identify and prioritise requirements for restoration.

5.8.1 'Next Steps' process

As part of the 'Next Steps' process, NASCO has identified the protection and restoration of Atlantic salmon habitat as one of the key challenges facing the Organization (also see section 3).⁸⁵ The overall goal of NASCO and its Parties in this regard was to maintain and, where possible, increase the current productive capacity of Atlantic salmon habitat. The key issues that were identified were: ensuring effective implementation of NASCO's Plan of Action, enhance sharing and exchange of information on habitat issues and best management practices between NASCO Parties and other relevant international bodies and maintaining the NASCO salmon Rivers Database.

In order to address this challenge, the Parties were requested to submit an IP in 2007 detailing the measures to be taken over a five year period with regard to habitat protection and restoration, among other issues. In 2009 and 2010, NASCO also conducted a review of habitat protection, restoration and enhancement based on FARs prepared by the Parties.⁸⁶ These initiatives are explained in detail below.

5.8.2 Consistency of habitat protection and restoration efforts with NASCO agreements and guidelines

In its review of the jurisdictions that submitted FARs, the Habitat Protection, Restoration and Enhancement Focus Area Review Group noted specific issues in relation to habitat management, including difficulties in restoring salmon populations, in addition to the failures in reporting. The FAR Review Group noted that, as required by the NASCO Plan of Action, there was a need for jurisdictions to develop a general strategy for the protection of habitat for all salmon rivers including measures to minimise impacts and identify and prioritise requirements for restoration, as part of their comprehensive salmon habitat protection and restoration plan.

The FAR Review Group concluded that certain areas required particular attention as described below:

- While some FARs provided information on the quantity and quality of current habitat, many jurisdictions failed to do so, which was necessary in order to provide a benchmark for assessing progress in protecting and restoring salmon habitat.

⁸⁵ CNL(05)49.

⁸⁶ CNL(09)12 and CNL(10)11.

- Few FARs reported on how habitat protection and restoration plans aimed to maintain biodiversity, as required by the NASCO Plan of Action, including how habitat activities affected other species of flora and fauna in the area where those activities were conducted.
- Most FARs failed to address how habitat protection and restoration plans took into account other biological factors affecting the productive capacity of salmon, as required by the NASCO Plan of Action (e.g., predator-prey interactions, invasive species, poor water quality, aquaculture and diseases and parasites).
- While most FARs provided some details on how habitat plans aimed to place the burden of proof on proponents of an activity that may have an impact on habitat, as provided under the NASCO Plan of Action, further clarification was needed.
- Most FARs failed to provide a clear indication of how socio-economic factors were incorporated into decisions concerning the management of salmon habitat. It was noted that NASCO guidelines and agreements do not make it clear how habitat management decisions were to be taken when there are conflicts between socio-economic and conservation issues.

As a result of these assessments, the FAR Review Group determined that additional guidance should be developed to assist jurisdictions in implementing NASCO's agreements and guidelines and reporting in subsequent habitat FARs, to address inconsistencies in the Agreements and to assist future FAR Review Groups in assessing the FARs. In this regard, NASCO subsequently adopted Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat.⁸⁷

While the Plan of Action addresses only habitat protection and restoration, the Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat also address habitat enhancement. The following Table 5 summarises the information in 2010 on quantity of river salmon habitats for each jurisdiction:

Table 5: Summary of 2010 information on quantity of river salmon habitats

Summary of 2010 information on quantity of river salmon habitats by jurisdiction		
Jurisdiction	Habitat estimate	Comments
Canada	More than 700 rivers in eastern Canada. Areas of both river and lake habitat estimated but no details given. Northern rivers not surveyed but conservation requirements based on index river data.	Estimated in 1989 that net loss of 16% of habitat since 1870 offset by 2% gain due to fish passage improvements.
Denmark	No habitat estimate given but details of the number of rivers and their status provided.	Of the 9 original salmon rivers only 4 still have wild stocks. The remaining rivers are maintained by stocking.
Finland	50 million m ² of production area in Rivers Teno and Nataamo	Largely pristine with little human impact

⁸⁷ CNL(10)51.

France	14.85 million m ²	
Iceland	3,500 km of salmon habitat	Current estimate 27% higher than historic due to opening impassable waterfalls
Ireland	Total river habitat 159 million m ² Total river habitat accessible to salmon 111million m ² Total lake habitat 1,052 million m ² Total lake habitat accessible to salmon 443 million m ² Habitat upstream of large-scale hydro plants 40 million m ²	
Norway	No habitat estimate given but details of the number of rivers and their status provided.	450 rivers that sustain or once sustained wild salmon stocks
Sweden	2.37 million m ² and an additional 422,000 m ² of potential habitat	
Russia	Information is presented on the length of salmon rivers and catchment areas by region as follows: Murmansk: river length 4,569 km; area 120,616km ² Archangelsk: river length 19,237 km Komi: river length 3,935 km: area 813,900 km ² Karelia: six rivers of lengths between 100 – 200km	
UK – England & Wales	Total accessible wetted area of 118.3 million m ²	Estimate for the 64 principal salmon rivers
UK – N.Ireland	No estimate of habitat given but surveys conducted and habitat composition given for each catchment	
UK - Scotland	177 million m ² of river habitat accessible to salmon 686 million m ² lake habitat accessible to salmon 13 million m ² river habitat lost to salmon 81 million m ² lake habitat lost to salmon	Historical habitat was estimated as the current habitat plus the area upstream of impassable man-made barriers
USA	For Gulf of Maine: 75.8 million m ² historical salmon habitat 39.4 million m ² accessible today (i.e. 52%) Of currently available habitat, 23% relies on 'trap and truck' operations.	Estimates derived using a GIS-based habitat prediction model using data (e.g. slope, drainage area) derived from surveys

Analysis

The above overview of habitat estimates gives additional information on the state of the rivers. Information on this matter is also given in the ICES advice and found in the salmon river database. The information from these three sources should be compared to give a more comprehensive picture of the situation in the salmon rivers of the North Atlantic.

Recommendations

10. The Parties are encouraged to report on issues relating to the protection and restoration of salmon habitat in a timely fashion.

11. As recommended by the 'Next Steps' Review Group, there is a need for further progress

to be made in the protection and preservation of salmon habitat as part of the next cycle of the 'Next Steps' process.

5.9 Capacity management

NASCO has not adopted any measures on the management of fishing capacity, primarily because there are no, or very few, vessels fishing for salmon in the area of the Convention.

However, there have been significant reductions at national level in netting effort all around the North Atlantic, together with restrictions on rod and line fisheries, partly for domestic reasons and partly in recognition of the obligations under the Convention. For example, there are now no directed fisheries for salmon in the United States of America, no commercial salmon fisheries in Canada, and no drift net fishery in Norway or in Ireland.

Some jurisdictions (e.g. UK (England and Wales) and UK (Northern Ireland)) have a clear policy to phase-out multi-stock fisheries although no timescale has been given. In the FAR for the UK (Northern Ireland), it was reported that 90% of the licensed commercial fishing gear in its Fisheries Conservancy Board area was removed through a voluntary buy-out scheme and the policy was for a voluntary buy-out of the remaining commercial nets.

A list of commercial buy-out salmon agreements was reported by the North Atlantic Salmon Fund (NASF) in March 2012.⁸⁸ In most cases NASF has been involved to ensure that its principles and the socio and socio-economic issues are addressed, in effect ensuring that fishermen receive financial compensation.

Analysis

Prohibitions in the Convention, as well as binding decisions and other NASCO agreements and guidelines have been supported by buy-out schemes funded by private funds and charities. This has led to a huge reduction in netting effort and mixed-stock fisheries.

Mixed-stock salmon fisheries reportedly still continue off the coasts of Norway, UK, Ireland and elsewhere. This issue has been recommended as a subject for a future Special Session.⁸⁹

Recommendation

12. If there is to be a balance between measures aimed at ending mixed stock fisheries in the areas beyond fisheries jurisdiction and measures ending mixed stock fisheries within fisheries jurisdiction, NASCO should aim at managing mixed-stock fisheries in the North Atlantic to protect the weakest of the contributing stocks.

⁸⁸ NASF 2012, List of salmon license buy-outs: <http://www.nasfworldwide.com/about-nasf/nasf-campaigns-so-far/>.

⁸⁹ WGFR(11)8.

5.10 External impacts

There are a wide range of external impacts on the freshwater and marine environment in the North Atlantic. In 2010, OSPAR identified the following activities in its Quality Status Report⁹⁰ as affecting coastal and oceanic waters in the North East Atlantic:

- Climate change
- Eutrophication
- Hazardous substances
- Radioactive substances
- Offshore Oil and Gas Industry
- Use of marine living resources
- Other human uses and impacts, including offshore wind farms and coastal development

With regard to the use of marine living resources, OSPAR concluded as follows:

“Fishing pressure continues to have a considerable impact on marine ecosystems and many problems remain despite efforts to improve management. Exploitation of many stocks continues to be beyond the levels they can sustain, while the status of a large number of stocks cannot be fully assessed due to poor data. Habitat destruction and the depletion of key predator and prey species and consequent food web effects are of concern. Mariculture is a growing activity which needs careful management to minimise potential impacts.”

In NASCO, the focus has been on the impacts due to aquaculture, introductions and transfers and transgenics, habitat degradation and the use of marine resources. As described above, NASCO has addressed issues relating to habitat degradation in the Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon habitats.⁹¹ In these Guidelines, NASCO lists life stages with particular habitat requirements:

- spawning, incubation and early development;
- juvenile rearing;
- juvenile and adult migrations; and
- pre-spawning adults.

In terms of impact factors, these Guidelines refer to: increased siltation/sedimentation, changes in substrate (e.g. gravel removal), changes in river morphology (e.g., channelization), changes in water quantity (e.g., reduced base flows) and quality (e.g., domestic and industrial effluents and nutrient enrichment). More specifically, the impact of the ever growing aqua- and mariculture in the North Atlantic has been a main concern.

As described in section 5.10.2, concerns have also been raised over by-catch of salmon in pelagic fisheries for other species. Evidence presented to NASCO in 1992 indicated that by-

⁹⁰ OSPAR Quality Status Report, available at: <http://qsr2010.ospar.org/en/ch01.html>.

catches of salmon in a pelagic trawl fishery for mackerel in international waters close to the Norwegian EEZ were as high as 0.3 tonnes in a single haul. In 2003, Iceland reported that up to 200 salmon were caught in a short period as by-catch in herring fisheries using expandable pelagic trawl in the Svalbard area.

5.10.1 Aquaculture, introductions and transfers and transgenics

Salmon aquaculture includes farming, ranching and stocking activities. Salmon farming is a dynamic industry that has increased dramatically since NASCO was established. Salmon ranching, on the other hand, is currently only conducted at an experimental scale in the North Atlantic.

Stocking of salmon is conducted for a variety of reasons, including restoration, rehabilitation, mitigation and enhancement. The rearing of transgenic salmon is currently on an experimental scale in secure land-based facilities.

NASCO first reviewed the potential impacts of salmon farming on wild salmon stocks in 1988 and subsequently organised workshops and international symposia in 1990, 1997 and 2005. The growth of this major industry has raised concerns, particularly with regard to the genetic and other impacts of escaped farmed salmon on the wild salmon stocks and the transmission of diseases and parasites, such as sea lice, from farmed to wild salmon. There are also concerns over the ecological interactions of salmon farming on the wild salmon stocks and a management framework is required that allows the industry to prosper while safeguarding the wild stocks. Interactions between wild and cultured salmon are not restricted to those arising from salmon farming.

While much progress had been made in addressing the impacts of aquaculture and in better understanding the nature of these impacts, sea lice and escaped farmed salmon have been identified as a continuing challenge both for the salmon farming industry and the wild stocks and on which further progress is urgently needed. These issues were considered at the latest international symposium held in Bergen in 2005,⁹² as described in Table 6.

Table 6: Conveners' Report of the ICES/NASCO Third International Symposium

**Conveners' Report of the ICES/NASCO Third International Symposium on Interactions
between Aquaculture and Wild Stocks of Atlantic Salmon
Bergen, Norway, 18 to 21 October 2005**

The Conveners propose that interactions between farmed and wild salmon need to be virtually eliminated, not just reduced. There are risks not only from farmed salmon but also from inappropriate stocking practices to be addressed. While progress is being made in managing interactions, the large scale of the salmon farming industry means that solutions are urgently required. We believe that progress in addressing the sea lice problem has been

⁹² See Hansen, L.P. & Windsor, M. 2006, Interactions between aquaculture and wild stocks of Atlantic salmon and other diadromous fish species: science and management, challenges and solutions, NINA Special Report 34, 74 pp. Trondheim, October, 2006.

made and can continue to be made by concerted action and widespread use of best practice but it is clear that difficulties remain, particularly with regard to protecting wild sea trout populations. The prospect of resistance developing to the available lice treatments is a real concern for both wild and farmed salmon interests.

Progress has also been made in reducing escapees but their numbers remain large relative to the wild stocks and they may be irreversibly damaging the stock structure and diversity of the wild Atlantic salmon. In our view, this symposium confirms that containment of farmed salmon must be made much more effective. If physical containment cannot be achieved then the use of sterile salmon may be necessary.

We believe that if no action is taken now, and if the views of the many scientists and experts at the symposium, and the two preceding symposia, are correct, we risk the loss of the diversity of local adaptations in the wild stocks of salmon in the North Atlantic. This may well have serious consequences for their fitness, productivity and ability to survive environmental change.

At the international symposium, the following observations were made on the issue of *Gyrodactylus salaris*, or sea lice, in the North Atlantic:

1. A review of parasitic agents affecting Atlantic salmon, from viruses and bacteria to ectoparasites, concluded that epidemics can affect both farmed and wild fish and have consequences for both: population regulation in wild fish and economic damage and welfare effects in farmed fish. Wild fish are the ultimate source of parasites and can also be reservoirs for infection which impede eradication programmes in farms, but farming can exacerbate disease problems through promoting conditions favouring epidemics, long-range transport and spill-over back into the wild. It was noted that epidemics among farmed populations do not necessarily result in epidemics among wild fish populations, highlighting the importance of good bio-security and husbandry in mitigating risk.
2. A review of the impacts of sea lice on farmed and wild salmonids concluded that sea lice must presently be regarded as a potentially important population-regulating factor in many salmonid stocks. Methods to assess infestation levels on migrating post-smolts have been developed. Pest management measures introduced by the farming industry to reduce the number of sea lice larvae in salmon farming areas are probably of most benefit to salmon stocks. Reference was made to the high infestation pressure imposed by farms on wild stocks in many areas and the inverse relationship between the incidence of lice on wild sea trout and distance from fish farms.

In response to concerns about salmon farming and other forms of aquaculture, NASCO adopted the “Williamsburg Resolution” in 2003,⁹³ which consolidated NASCO’s previous

⁹³ Resolution by the Parties to the Convention for the Conservation of Salmon in the North Atlantic Ocean to Minimise Impacts from Aquaculture, Introductions and Transfers, and Transgenics on the Wild Salmon Stocks, CNL(06)48.

agreements on aquaculture. The resolution also included new elements, such as the burden of proof, mitigation and corrective measures, and risk assessment, to ensure consistency with the precautionary approach, as well as guidance on stocking and on containment of farmed salmon and for action on transgenic salmon.

In 2009, the liaison group established by NASCO and the International Salmon Farmers Association (ISFA/NASCO Liaison Group) developed Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks (the “BMP Guidance”),⁹⁴ which was intended to supplement the Williamsburg Resolution in relation to sea lice and containment. It set new international goals in relation to sea lice and escaped farmed salmon with the basic principle that salmon stocks in areas with salmon farming should be in as healthy a state as those in areas without salmon farming.⁹⁵ In addition, the BMP Guidance was intended to assist NASCO’s jurisdictions in framing the management of salmon aquaculture, in cooperation with their industries, in developing future NASCO IPs and in preparing their FARS, as part of the ‘Next Steps’ process.

5.10.1.1 ‘Next Steps’ process

As part of the ‘Next Steps’ process, NASCO identified aquaculture, introductions and transfers and transgenics as one of the key challenges facing the Organization (also see section 3).⁹⁶ The overall goal of NASCO and its Parties was to minimise the possible adverse impacts of aquaculture, introductions and transfers and transgenics on the wild stocks of Atlantic salmon, including working with industry stakeholders, where appropriate. The key issues identified in the Strategic Approach were to:

- determine the need for internationally agreed regulations or standards for aquaculture, introductions and transfers and transgenics;
- enhance public awareness of developments concerning aquaculture, introductions and transfers and transgenics;
- minimise the escape of farmed salmon to a level that is as close as practicable to zero;
- minimise any negative impacts of ranched salmon by utilizing, as far as possible, local stocks and developing and applying appropriate release and harvest strategies;
- minimise the adverse genetic and other biological interactions from salmon enhancement activities, including introductions and transfers;
- minimise the risk of transmission to wild salmon stocks of diseases and parasites from all aquaculture activities and from introductions and transfers; and
- consider the consequences of aquaculture of Atlantic salmon in countries that are non-Parties to NASCO.

In order to address this challenge, the Parties were requested to submit IPs in 2007 detailing the measures to be taken over a five year period with regard to aquaculture, introductions

⁹⁴ SLG(09)5.

⁹⁵ The international goal for sea lice is 100% of farms to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms. The international goal for containment is 100% farmed fish to be retained in all production facilities.

⁹⁶ CNL(05)49.

and transfers and transgenics, among other issues. In 2010 and 2011, NASCO conducted a review of aquaculture, introductions and transfers and transgenics based on FARs prepared by the Parties.⁹⁷

The Aquaculture, Introductions and Transfers and Transgenics Focus Area Group, in its review of the jurisdictions that submitted FARs, raised a number of issues in relation to aquaculture, introductions and transfers and transgenics, including the tenuous state of wild salmon stocks, in addition to the failures in reporting and deficiencies in information.

The FAR Review Group recognized that progress has been made by the salmon farming industry in introducing measures intended to minimise impacts on wild salmon stocks, however, many FARs failed to provide information to demonstrate progress towards achieving the international goals for sea lice and containment. It found that jurisdictions with a large production of farmed salmon bore a particular responsibility to minimize the threats that their activities posed to the wild stocks domestically and internationally. In this regard, the guidance in the Williamsburg Resolution and the BMP Guidance needed to be fully implemented by all jurisdictions with stronger measures where local conditions dictate.

The FAR Review Group also found that better protection of the wild stocks from adverse impacts may be achieved when government authorities set technical and environmental standards, oversee monitoring and impose strict monitoring requirements and schedules. In addition, there was a need for monitoring programmes of wild salmon populations to determine impacts from salmon farming and for the enforcement of measures designed to safeguard wild salmon stocks.

With regard to containment, the FAR Review Group considered that there should be an effective tagging or marking system that enabled escaped farmed salmon from both freshwater and marine farms to be identified in the wild and that would allow identification of the facility from which the fish originated.

On the issue of sea lice, monitoring of lice loads on wild salmonids as well as of lice-induced mortality of wild salmonids was needed to better assess sea lice impacts on the wild stocks. In addition, contingency plans were needed that would apply in the event of a serious outbreak so that there was a rapid and effective response to prevent the transmission to the wild stocks and spread of the diseases and parasites, including treatment methods, restrictions on movements, mass harvesting, and disposal arrangements.

As describe in Table 7, the FAR Review Group also identified a number of specific issues from its assessment of the FARs.

⁹⁷ CNL(10)12 and CNL(11)11.

Table 7: Comments of the Aquaculture, Introductions and Transfers and Transgenics Focus Area Group

Comments of the Aquaculture, Introductions and Transfers and Transgenics Focus Area Group (CNL(11)11)

1. As stipulated in the Williamsburg Resolution, each jurisdiction was required to have an action plan in place, comprised of measures for minimising escapes; mechanisms for reporting information on the level and causes of escapes; and mechanisms for reporting and monitoring in order to assess compliance and to verify the efficacy of the measures taken.
2. Few FARs presented information relating to international cooperation on matters relating to minimising impacts of aquaculture and related activities on the wild stocks and the outcomes of such cooperation. In this regard, the Williamsburg Resolution called for cooperation to minimise impacts of aquaculture and related activities on the wild salmon stocks.
3. Although the FARs indicated that there was no salmon ranching presently being undertaken in the North Atlantic other than on an experimental scale, there had been large-scale ranching of salmon in the past and this issue might require further consideration in the future if marine survival rates improve.
4. While there was often a requirement in risk assessments to consider the impacts on the marine environment (particularly benthic impacts) or exposure of the site, little consideration appeared to be given to the risks to the health, genetic diversity and status of wild salmonid stocks in the decision-making process. Thus, while the potential carrying capacity of the environment may be considered, the effects that the proposed increase in biomass would have on the wild salmon stocks in terms of the prevalence of sea lice, increased disease risk or increased threats from escapees may not be taken into account. In this regard, the Williamsburg Resolution indicated that there was a need to identify the appropriate factors to be included in a risk assessment in order to evaluate the potential impacts of aquaculture and related activities on wild salmon stocks.
5. While most jurisdictions with salmon farming indicated that the industry was not in favour of rearing transgenics, few FARs described clearly if the controls exist to ensure any use of transgenic salmonids was confined to secure, self-contained, land-based facilities, consistent with the Williamsburg Resolution.
6. Few FARs referred to how river classification was used for developing management measures in relation to aquaculture and related activities. While wild salmon protection areas and aquaculture exclusion zones had been established in some jurisdictions, there is a need to assess their effectiveness in protecting the wild stocks. In this regard, the Williamsburg Resolution stated that for the purpose of developing management measures concerning aquaculture and introductions and transfers, river classification and zoning systems should be developed, as appropriate.

7. Many FARs did not report clearly on corrective measures to be taken where significant adverse impacts on wild stocks were identified and in others little information was presented on the nature of the measures to be taken to protect the wild stocks when unforeseen impacts were detected.

8. While some FARs referred to the social and economic values associated with the salmon farming industry, they did not refer to the economic values associated with the wild stocks which also need to be taken into account in management decisions. There were also instances where the value of the wild stocks had been adversely affected by impacts from aquaculture and related activities.

9. Many of the FARs did not describe programmes to assess the effectiveness of their management measures. Accordingly, the Review Group was unable to assess if the measures were effective in safeguarding the wild stocks and achieving the international goals contained in the BMP Guidance.

10. The jurisdictions had, to varying degrees, developed programmes of research in support of the Williamsburg Resolution, however, further research and development on improved containment technologies, alternative approaches to the production of sterile salmon and commercial-scale trials with sterile salmon were urgently required, as well as further research and development of vaccines and effective therapeutants for sea lice.

Analysis

In the past seven years, including through the 'Next Steps' process, NASCO has consolidated its agreements and guidance relating to aquaculture, introductions and transfers and transgenics. The Williamsburg Resolution consolidated NASCO's previous agreements on aquaculture and the BMP Guidance supplemented the Williamsburg Resolution in relation to sea lice and containment. However, problems with sea lice and escaped farmed salmon are still major concerns. In areas where aquaculture operates near salmon rivers, escapements from fish farms, genetic contamination from cultured salmon, competition for space in the rivers and sea lice have been and still are major problems, which have not found any solution.

A number of specific issues have been identified by the FAR Review Group as part of the 'Next Steps' process that will require further action and additional review in the next cycle of reporting.

Recommendations

13. Additional progress is needed towards achieving the international goals for sea lice and containment.

14. As recommended by the FAR Review Group, there is a need for further progress to address the impacts of aquaculture, introductions and transfers and transgenics as part of the next cycle of the 'Next Steps' process.

15. The Parties are encouraged to report on issues relating to aquaculture, introductions and transfers and transgenics in a full and timely fashion.

5.10.2 By-catch in pelagic fisheries

In past reports, ICES had raised concerns over the possible by-catch of salmon in fisheries for pelagic marine fish species in the North-East Atlantic. However, the degree to which by-catch of salmon may be occurring in pelagic fisheries was unclear. Evidence presented to NASCO in 1992 indicated that by-catches of salmon in a pelagic trawl fishery for mackerel in international waters close to the Norwegian EEZ were as high as 0.3 tonnes in a single haul.⁹⁸ It was thought that post-smolts could go undetected in large hauls particularly if the fish was ultimately destined for industrial purposes.⁹⁹ In 2003, Iceland reported that up to 200 salmon were caught in a short period as by-catch in herring fisheries using expandable pelagic trawl in the Svalbard area.¹⁰⁰ A survey of Icelandic trawler fishermen conducted by the Institute of Freshwater Fisheries in cooperation with the Association of Icelandic River Associations estimated that approximately 5000 salmon were caught in 2005 in pelagic trawls.¹⁰¹

At a meeting of the coastguard and fishery protection authorities in the North-East Atlantic in 2007, it was agreed that more information was needed on this large-scale pelagic fishery. In this respect, NASCO had requested ICES to evaluate the potential by-catch of post-smolts in pelagic fisheries. It was also recommended that the question of by-catch of salmon should be taken up with fishermen's organizations and processing plants in an attempt to obtain more detailed information on the scale of the problem. The need for continued vigilance in relation to directed fishing for salmon in international waters was recognised.

The FARs of several jurisdictions (Iceland, UK (Northern Ireland, UK (Scotland)) refer to the potential by-catch of salmon post-smolts in pelagic mackerel and herring fisheries in the North-East Atlantic and in coastal fisheries for Arctic char.

Analysis

Despite all the measures taken by NASCO and its Parties, the abundance of salmon has continued to decline and appears to relate to poor survival at sea.

As part of the SALSEA Programme, which was developed to respond to declining abundance of salmon due to poor survival at sea, an international symposium, the 'Salmon Summit', was held in La Rochelle, France in October 2011. A clear message of the symposium was that conditions in the North Atlantic had changed as the Northern Hemisphere has warmed

⁹⁸ CNL(97)23, CNL(97)23, Surveillance of Fishing for Salmon in International Waters.

⁹⁹ Also see CNL(97)42.

¹⁰⁰ CNL(03)27

¹⁰¹ CNL(07)71, Presentations Made at the 2007 Special Session on Unreported Catches (with an upper and lower 95 % confidence limit of 3100 to 7000 salmon).

and that this had implications for the salmon throughout its range in both freshwater and the sea. It was concluded that managers must redouble their efforts to maximise smolt numbers and their quality so as to maximise their potential to adapt to a fast changing environment.

One of the studies at the symposium concluded that, increases in by-catch reports could be attributed to larger and more efficient gear and changes in the distribution of mackerel fisheries in the North-East Atlantic. Accordingly, surveys at processing plants and screening of commercial fishing vessels were strongly recommended.¹⁰²

Other reports from the Russian Federation (observers on board fishing vessels) Iceland and the Faroe Islands (analysis of landings), however, seem to indicate that by-catches by commercial pelagic fishing vessels are not major concerns with respect to sea mortality of salmon.

Recommendations

16. Sea mortality should be further investigated in relation to all phases from the time the salmon leaves natal waters.

17. Observer programs on and screening of landings of pelagic vessels fishing in seasons and areas where salmon make feeding migrations should be continued.

5.10.3 *Gyrodactylus salaris*

The parasite *Gyrodactylus salaris* is a very serious problem in some parts of the North-East Atlantic Commission area, following its inadvertent introduction from the Baltic Sea. In Norway, the parasite has infected 45 watercourses, where the juvenile populations have declined by 86% on average. The parasite has also been identified in 13 rivers on the west coast of Sweden, in two rivers in Karelia in Russia, and in watercourses in Northern Finland. Iceland, the UK and Ireland are free of the parasite. It is considered absolutely vital that the further spread of the parasite is prevented and that it is eliminated from infected rivers.

In 2004, NEAC adopted a 'road map' containing recommendations to enhance cooperation on monitoring, research and exchange of information in relation to this parasite and on measures to prevent its spread. One of the key elements of the road map was the need for the additional guarantees allowing restrictions on the movement of live fish under European Union legislation to be continued in the future.

In 2010, the European Commission adopted a decision that meant that certain jurisdictions (Ireland, UK, and specified river catchments in Finland) would be able to continue to take protective measures against the parasite. However, the Working Group has not met since 2008 so progress on the elements in the 'road map' has not been reported.

¹⁰² Marianne Holm et al, The Spatial and Temporal Distribution of Salmon and the Pelagic Fisheries in the North-East Atlantic: A Potential for By-catch?

In the context of the 'Next Steps' process, the issue of *Gyrodactylus salaris* was identified as a key challenge in the NASCO Strategic Approach.¹⁰³ The goal for NASCO and its Parties was to prevent the further spread of this parasite and to eradicate it from infected areas, working with stakeholders, where appropriate. The key issues that were identified were to:

- Minimise the threat posed by *Gyrodactylus salaris* to Atlantic salmon;
- Enhance cooperation on monitoring, research and dissemination of information regarding *Gyrodactylus salaris*, with special regard to the lack of knowledge on distribution and ecology of the parasite;
- Strengthen international, national and regional legislation and guidelines to prevent the further spread of *Gyrodactylus salaris*.

The Aquaculture, Introductions and Transfers and Transgenics Focus Area Review Group noted that there had been limited reporting in the FARs on progress in implementing NEAC's 'road map'. It agreed, however, that given the risks posed by the spread of this parasite, further exchange of information among the jurisdictions was important and that future reporting under the IPs may be the most appropriate way to facilitate this exchange.

Analysis

Since the last meeting of the *Gyrodactylus salaris* Working Group, there appears to have been limited consideration of this topic, although some FARs included information. It is clearly a very serious threat to the wild salmon and exchange of information on monitoring approaches, preventing further spread and approaches to eradication seems appropriate given the recommendations in the 'road map'.

Recommendations

18. It is recommended that further efforts be made to address the issue of *Gyrodactylus salaris* in the context of the NASCO 'Next Steps' process.

19. Further exchange of information among the jurisdictions through the development of IPs and FARs, as appropriate, should be welcomed.

6. COMPLIANCE AND ENFORCEMENT

6.1 Introduction

A wide range of decisions have been adopted in NASCO to improve compliance and enforcement in the conservation, restoration, enhancement and rational management of salmon. Some of these decisions have been taken by the Council and the Commissions under their respective mandates. The Parties have also taken action within their territories

¹⁰³ CNL(05)49.

and areas of fisheries jurisdiction to make effective the provisions of the Convention and to implement binding regulatory measures.

In this regard, article 14 of the Convention provides that each Party is required to ensure that such action is taken, including the imposition of adequate penalties for violations, as may be necessary to make effective the provisions of the Convention and to implement regulatory measures which become binding on it. Reporting obligations of the Parties are provided in article 15 of the Convention.

With regard to fishing activities, the focus of compliance and enforcement efforts has been on areas under fisheries jurisdiction, as fishing in areas beyond fisheries jurisdiction has been prohibited under the Convention. The Convention further provides that fishing activity is only permitted within limited areas of the fisheries jurisdiction of coastal States. More specifically, salmon fishing is prohibited beyond 12 nautical miles from the baselines of coastal States, with two exceptions: (i) in the WGC area, fishing is permitted up to 40 nautical miles from the baselines, and (ii) in the NEAC area, fishing is permitted within the area of fisheries jurisdiction of the Faroe Islands.

Due to reductions in fishing effort, many commercial fisheries have now been closed and fishing in some areas has been reduced to internal use or subsistence fisheries only. It has thus been necessary for the Parties to enhance efforts within their territories and areas of fisheries jurisdiction to ensure compliance with current restrictions.

6.2 The Council and Commissions of NASCO

The Council has the authority to make recommendations to the Parties and the Commissions on matters concerning salmon stocks, including the enforcement of laws and regulations. However, recommendations cannot be made concerning the management of salmon harvests within the area of fisheries jurisdiction of a Party, in the absence of a request from a Commission pursuant to article 4.3. In the past, decisions have also been adopted by the Council on other areas of focus, namely habitat protection and restoration and aquaculture, introductions and transfers and transgenics. However, these decisions have rarely dealt with issues relating to compliance and enforcement.¹⁰⁴

The Commissions, on the other hand, have a clear mandate to propose binding regulatory measures for salmon fisheries under areas of fisheries jurisdiction, including in regard to compliance and enforcement. Regulatory measures for salmon fisheries have been adopted by WGC and NEAC on an annual basis since 1984, with limited exception. NAC agreed on a regulatory measure in 1986 concerning the date of the season closure in Labrador, in response to concerns that these fisheries were exploiting salmon of US origin. Since then, no measures have been agreed, but the remaining fisheries are not thought to intercept US origin salmon.

Decisions have also been adopted by the Commissions with regard to aquaculture, introductions and transfers, seemingly based on their function in providing a forum for

¹⁰⁴See, for example, CNL(06)48.

consultation and cooperation (see section 7).¹⁰⁵ These decisions have taken the form of resolutions, memorandum of understanding and protocols.¹⁰⁶ In some cases, they have also addressed compliance and enforcement issues, for example, monitoring and surveillance to control fish diseases.

Generally speaking, the decisions that have been adopted by the Commissions have contained only general references to issues of compliance and enforcement, as these matters have been largely left to the coastal States concerned.¹⁰⁷ This is consistent with the mandate and functioning of the Commissions, as well as article 9 of the Convention which requires the Commissions, in exercising its functions, to take into account the efforts of States of origin to implement and enforce measures for the conservation, restoration, enhancement and rational management of salmon stocks in their rivers and areas of fisheries jurisdiction.

6.2.1 The 'Next Steps' process

As part of the 'Next Steps' process, the Council has adopted a wide range of decisions relating to the current areas of focus of the Organization (see section 3). In this context, the Council has taken on an expanded role and it has evolved into the principal decision-making body in the Organization, although the Commissions have continued to adopt regulatory measures for the distant-water fisheries. The role of the Council in relation to compliance and enforcement has also evolved, including through the adoption of guidelines to assist the Parties in making further progress in implementing NASCO's agreements and guidelines.

For example, with regard to fisheries, the Guidelines for the Management of Salmon Fisheries¹⁰⁸ contain elements that should be applied in all jurisdictions in order to protect the abundance and diversity of salmon stocks. In terms of controlling exploitation, these Guidelines indicate that managers should have the ability to enforce measures that are in place to regulate fishing activity and to minimise the level of unreported catches. With regard to aquaculture, the Guidance on Best Management Practices to Address Impacts of Sea Lice and Escaped Farmed Salmon on Wild Salmon Stocks provides guidance on mandatory reporting of escape events and investigation of causes of loss of escaped farmed fish, as well as monitoring of rivers for escaped salmon.¹⁰⁹

The 'Next Steps' process has also demonstrated that, although progress has been made on the areas of focus of NASCO, there is a need for further efforts by the Parties to implement and ensure consistency with NASCO agreements and guidelines, including on issues of compliance and enforcement. For example, with regard to aquaculture, introductions and transfers and transgenics, the FAR Review Group determined that there was a need for monitoring programmes of wild salmon populations to determine impacts from salmon farming and for the enforcement of measures designed to safeguard wild salmon stocks. In

¹⁰⁵See articles 7 and 8 of the Convention.

¹⁰⁶See, for example, NAC(92)24, NEA(97)12 and NEA(04)13.

¹⁰⁷See, for example, WGC(01)16 and NEA(84)7.

¹⁰⁸See, for example, CNL(09)43.

¹⁰⁹SLG(09)5. Also see, the Guidelines for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat (CNL(10)51).

addition, there was a need for an effective tagging or marking system that enabled escaped farmed salmon from both freshwater and marine farms to be identified in the wild and that would allow identification of the facility from which the fish originated.¹¹⁰

Analysis

The Convention provides an adequate framework for the adoption of binding regulatory measures by the three Commissions for fishing activities in areas of fisheries jurisdiction, including with regard to compliance and enforcement. The Commissions have also adopted decisions concerning aquaculture, introductions and transfers, with some consideration given to issues of compliance and enforcement, although their decision-making mandate in this regard is not clear in the Convention (see section 7). Consistent with article 9 of the Convention, as well as article 66 of UNCLOS, the Commissions have largely left matters relating to compliance and enforcement to the coastal States concerned.

In the context of the 'Next Steps' process, the role of the Council has evolved, including with regard to compliance and enforcement. Through the decisions of the Council, significant efforts have been made to promote the conservation, restoration, enhancement and rational management of salmon stocks.

It is evident, however, that further progress is needed and the Organization is encouraged to continue these efforts in the context of the 'Next Steps' process. Consideration could be given to expanding the role of the Council with regard to compliance and enforcement and vesting it with the authority to make binding decisions (see section 4). Further efforts by the Parties with regard to compliance and enforcement within areas of fisheries jurisdiction are also encouraged (see below), including in the context of the 'Next Steps' process.

Recommendation

1. The 'Next Steps' process has been an effective mechanism to improve compliance and enforcement in NASCO, in large part due to the expanding and evolving role of the Council. The Organization is encouraged to continue these efforts to further improve compliance and enforcement and promote the conservation, restoration, enhancement and rational management of salmon stocks.

6.3 Fishing within areas of fisheries jurisdiction of coastal States

The Parties have adopted a wide range of compliance and enforcement measures to control salmon fishing within areas of fisheries jurisdiction, including carcass-tagging and logbook schemes, licensing and reporting systems, radio tags and other tracking devices, fish counters, catch surveys, catch registries and databases, surveillance and monitoring operations, observer databases, inspections, education and awareness raising programmes

¹¹⁰CNL(11)11.

and anonymous reporting. Efforts have also been taken to detect and follow-up on infringements and to impose adequate penalties for violations, including enforcement campaigns, on-the-spot fines, forfeitures of fishing gear and the imposition of jail terms for more serious offenders.¹¹¹

Significant actions have also been taken as part of the 'Next Steps' process to improve compliance and enforcement, as well as reporting by the Parties on illegal and unreported catches, as described below. A Special Session on Unreported Catches was also convened in 2007.¹¹²

Despite these efforts, illegal and unreported catches of salmon continue within areas of fisheries jurisdiction. Estimates of these catches have varied, but were as high as 52% of total reported catch in 1999.¹¹³ In 2010, the total illegal and unreported catch was estimated to be 382 tonnes, or 24% of the reported catch.¹¹⁴ Between 1999 and 2010, the estimates of total illegal and unreported catches ranged between 218 and 1,445 tonnes, with a decreasing trend.¹¹⁵ For individual countries, illegal and unreported catch estimates, expressed as a percentage of total North Atlantic catch, have ranged from 0% to 15%.¹¹⁶

6.3.1 Reporting on estimated illegal and unreported catches

The Parties have reported annually on their catches and their estimates of illegal and unreported catches within areas of fisheries jurisdiction, including the measures taken to minimise unreported catches. Although difficult to assess, these estimates of illegal and unreported catches in areas of fisheries jurisdiction have been calculated through a variety of means (e.g., based on a proportion of reported catch, knowledge of illegal activities and informal surveys). As described above, efforts have also been taken by the Parties to improve catch reporting and reduce unreported catches, in particular, through carcass tagging and logbook systems.¹¹⁷

The obligations of the Parties to report on catch and other statistics and information are contained in article 15 of the Convention. Also relevant is the 1993 Minimum Standard for Catch Statistics, which recommended that catch statistics include catches from all components of the salmon fisheries. Measures to assess unreported catches and to reduce their level were also encouraged, as well as studies to assess unreported catches. The Parties agreed to evaluate and report on progress in efforts to minimise unreported catches and improve estimates of such catches, pursuant to the 1998 Agreement on the Adoption of a Precautionary Approach.

Additional guidance on the reporting of catches was also developed as part of the 'Next Steps' process. The Guidelines for the Management of Salmon Fisheries stressed the need

¹¹¹See, for example, CNL(05)50, CNL(07)71 and CNL(09)11, Annex 5.

¹¹²CNL(07)71.

¹¹³See CNL(05)50.

¹¹⁴There was no estimate for the Russian Federation and the estimate for Canada was incomplete.

¹¹⁵See CNL(11)13. The estimated range since 2007 was between 218 and 576 tonnes.

¹¹⁶The methods of estimating unreported catches have also varied, with non-reporting rates ranging from 1% to 50% of the total national catch in individual countries (CNL(08)35).

¹¹⁷CNL(09)11.

for a range of information to be collected on a routine basis through reporting and monitoring programmes. These Guidelines recommended that this information should be collected for recreational, commercial, subsistence and scientific fisheries and include estimates of the level of unreported catches and other mortalities associated with the fishery.¹¹⁸

Following the 2007 Special Session on Unreported Catches,¹¹⁹ the Council proposed that existing reporting on the estimates of unreported catches should be continued in annual reports. However, other information (i.e., details on management control and reporting systems, estimation of unreported catch and measures taken to minimise unreported catches) should be included in the focus area reports. Furthermore, that the Parties should consider how to incorporate into their implementation plans the issues of minimising unreported catches and improving estimates of such catches.¹²⁰

More recently, recommendations have been made as part of the next cycle of reporting in the 'Next Steps' process for the Parties to provide statistics on reported and unreported catches, not only as totals, but also divided between in-river, estuarine and coastal catches, in order to assist in assessing progress in fisheries management.¹²¹

6.3.2 Cooperative mechanisms to detect and deter non-compliance

The Convention does not explicitly provide for the establishment of cooperative mechanisms to detect and deter non-compliance, such as vessel lists or information sharing mechanisms or the establishment of a compliance committee. Since fishing is prohibited in areas beyond fisheries jurisdiction, such mechanisms have not been relevant in the history of NASCO.

Within areas of fisheries jurisdiction, the Parties have shared information on actions taken to detect and deter non-compliance, including through annual reports and focused area reports in the context of the 'Next Steps' process. These activities have been sufficient in providing a means for the exchange of information on compliance and enforcement within areas of fisheries jurisdiction.

Analysis

The Parties have reported on the adoption of a wide range of measures within areas of fisheries jurisdiction to control fishing activities and address illegal and unreported fishing. Improved reporting procedures and carcass tagging and logbook schemes have been particularly successful in reducing illegal and unreported fishing activities. These measures are consistent with the rights and responsibilities of the Parties in the Convention, in particular article 14, as well as article 66 of UNCLOS. The 1998 Agreement on the Adoption of a Precautionary Approach also noted that efforts to minimise unreported catches and to improve estimates were consistent with the precautionary approach.

¹¹⁸CNL(09)43, NASCO Guidelines for the Management of Salmon Fisheries.

¹¹⁹CNL(07)71.

¹²⁰CNL(08)13.

¹²¹WGFR(11)8.

Despite these efforts, high levels of illegal and unreported fishing continue to be reported in some jurisdictions. In the internal-use fishery in West Greenland, the 2010 reported catch was 40 tonnes and there was unreported catch estimated to be 10 tonnes. There are also differences between the jurisdictions on reporting obligations and the activities considered to constitute illegal or unreported fishing (e.g., recreational fisheries).¹²² Difficulties in estimating and minimising unreported catches continue to present challenges to the Parties.

As recommended in the 'Next Steps' process, further efforts are needed to minimise unreported catches and improve the estimating and reporting of such catches. The Parties should be encouraged to continue these efforts in the context of the 'Next Steps' process, such as by including in their implementation plans the obligation to report on estimates of unreported catches and the measures taken to reduce such catches.

It would be useful to convene a technical meeting to exchange information and best practices on the methods used to calculate unreported catches. In light of the range of approaches taken by the Parties to address illegal and unreported fishing, including differences in national reporting obligations, it would be of benefit to conduct a follow up review to the 2007 Special Session on Unreported Catches with a view, as appropriate, to developing consolidated guidance on these matters.

Recommendations

2. Despite progress in addressing illegal and unreported fishing within areas of fisheries jurisdiction, high levels continue to be reported. Further efforts are encouraged to address this issue, including through enhanced reporting procedures and logbook schemes.
3. The Parties are encouraged to continue to report on these matters in the next cycle of the 'Next Steps' process. Implementation plans should include reporting on estimates of unreported catches and measures taken to reduce such catches. Timely reporting is essential so that all relevant information is available during assessments.
4. Since difficulties in minimising and estimating unreported catches remain a common challenge for the Parties, consideration should be given to convening a technical meeting to exchange information and best practices on the methods used to calculate unreported catches. It would also be useful, given the range of approaches by the Parties to addressing illegal and unreported catches, to consider the development of best practices and consolidated guidelines.

6.4 IUU fishing activities in areas beyond fisheries jurisdiction

In the late 1980s, NASCO became aware of the activities of a small number of vessels fishing for salmon in areas beyond fisheries jurisdiction in the NEAC area. The vessels were registered to non-Parties and were catching up to 350 tonnes of salmon, more than the

¹²² CNL(07)71.

combined catch in the distant-water fisheries at that time. In response, the Council adopted a number of decisions calling for diplomatic action and a range of measures, including monitoring, control and surveillance and port State controls, to address the problem.¹²³

The Parties took action to implement these measures into the late 1990s, including through diplomatic initiatives and cooperative surveillance programmes (also see section 4).¹²⁴ Meetings were convened to review options for improvements in surveillance and to coordinate the activities of port State authorities, although practical difficulties hampered these efforts.¹²⁵ Linkages were also developed with other RFMOs in the area with concerns over IUU fishing activities in order to share information on the incidence of fishing by non-Parties.¹²⁶ At the time, NAFO, NEAFC and the International Commission for the Conservation of Atlantic Tunas (ICCAT) were provided with information on the activities of these vessels.

The actions taken by the Organization were successful in eliminating IUU fishing activities at the time. There have been no sightings of vessels fishing for salmon in areas beyond fisheries jurisdiction since 1994. However, it has long been recognised that there are considerable periods of the year, coinciding with the period of the fishery, when surveillance flights are not conducted.¹²⁷

Analysis

NASCO has demonstrated that it can respond quickly to address IUU fishing in areas beyond fisheries jurisdiction by vessels registered to non-Parties. However, it is not known whether IUU fishing activities for North Atlantic salmon are taking place in the area of the Convention, and if so the extent to which it may be occurring.

It is recognized that fishing patterns and methods, as well as MCS tools, have changed over the past decade. NEAFC and NAFO currently cooperate in MCS in respect of other fisheries in the area of NASCO and implement modern tools, such as observer programmes, boarding and inspection schemes, centralized VMS, data reporting and port State measures.

Initially, a cooperative and cost-effective way forward to enhance current NASCO surveillance efforts would be to request NEAFC and NAFO to include detection of fishing for North Atlantic salmon in their MCS programmes. This would help to determine whether IUU fishing for salmon is taking place, and if so the extent to which it may be happening.

If IUU fishing activities are discovered, appropriate and proportionate measures could be taken by the Organization to address the problem, including strengthening the NASCO surveillance programme, as appropriate.

¹²³See Resolution on Fishing for Salmon in International Waters (CNL(90)49); Protocol Open for Signature by States Not Parties to the Convention (CNL(92)53 and CNL(92)52); Resolution on Fishing for Salmon on the High Seas (CNL(92)54).

¹²⁴See, for example, CNL(93)26, Annex 18, CNL(96)25 and CNL(96)26.

¹²⁵See, for example, CNL(93)27 and CNL(97)23.

¹²⁶See, for example, CNL(93)27 Annex 19 and CNL(97)23.

¹²⁷See, for example, 93(27), CNL(97)23 and CNL(98)24, and subsequent annual reports of the Council.

Recommendations

5. NASCO should consider enhancing its current surveillance efforts by requesting the cooperation of NEAFC and NAFO in reporting on any suspected IUU fishing activities for salmon in the area of the Convention that may be detected in their MCS operations.

6. If IUU fishing activities for salmon in the area of the Convention are discovered, the Organization should take appropriate and proportionate measures to address the problem, including strengthening the NASCO surveillance programme, as appropriate.

7. DECISION-MAKING AND DISPUTE SETTLEMENT

7.1 Introduction

Decision-making processes and functions in many RFMOs are centralized and are designed to enhance cooperation and coordination in respect of the conservation and management of fish stocks in areas beyond fisheries jurisdiction. In NASCO, in contrast, the Convention prohibits salmon fishing in areas beyond fisheries jurisdiction and the mandate for decisions on regulatory measures for the conservation and management of salmon stocks is provided to the three Commissions in specified areas of the North Atlantic.

Within this framework, the Council's functions include administrative matters, undertaking scientific research and serving as a forum for the study, analysis and exchange of information on salmon stocks and for consultation and co-operation in regard to matters beyond Commission areas. As described below, in practice, the Council has fulfilled a much broader role, while the work of the Commissions has been more limited.

7.2 Decision-making

Pursuant to article 6(3) of the Convention, decisions of the Council are to be taken by a three-quarters majority, with three exceptions. A unanimous vote of the members present and casting an affirmative or negative vote is required in decisions of the Council on: (i) the membership of WGC or NEAC, (ii) the scope and the form of statistics for salmon other than catch statistics and (iii) adoption of amendments to the Convention.¹²⁸ A quorum of two-thirds of the members is necessary for a vote to be taken.

In contrast, all decisions of a Commission are to be taken by the unanimous vote of those present and casting an affirmative or negative vote. A quorum of two-thirds of those entitled to vote is necessary for a vote to be taken. The membership of the respective Commissions is provided in article 10 of the Convention. Separate provision is made for the European Union to have the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in its territories in NAC, and for Canada and the United

¹²⁸See articles 10.2-10.3, 15.2 and 19.2 of the Convention and rule 6 of the Rules of Procedure for the Council.

States of America to have reciprocal rights in respect of NEAC, pursuant to article 11.¹²⁹ According to article 10(4), the Parties may otherwise participate as observers in the deliberations of a Commission of which they are not members.

Pursuant to its Rules of Procedure, the Council is also required to establish a Finance and Administration Committee (see section 9) and it may establish such other subsidiary bodies as it deems necessary, including the composition and terms of reference of these bodies.

In terms of decision-making functions, the Council has the authority to make recommendations to the Parties and the Commissions on matters concerning salmon stocks subject to the Convention, pursuant to article 4. However, no recommendation may be made concerning the management of salmon harvests within the area of fisheries jurisdiction of a Party, absent a request pursuant to article 4.3.

In addition to administrative functions and the undertaking of scientific research, the Council acts as a forum for the study, analysis and exchange of information on salmon stocks and on achieving the objective of the Convention. It also facilitates the co-ordination of the activities of the Commissions, as well as the initiatives of the Parties in respect of the vessels of non-Parties under article 2.3.

The Council also provides a forum for consultation and co-operation on matters concerning salmon stocks in the North Atlantic Ocean beyond Commission areas. However, given the definitions of the areas of the Commissions in article 3(4), the role of the Council in this regard would be limited to a narrow area to the east of the NAC area extending to the boundary of the WGC and the NEAC areas.

In practice, the Council has acted as a forum and it has adopted decisions on a much wider range of issues than those provided in the Convention. Many of these decisions have been taken in the context of the 'Next Steps' process and the areas of focus identified in the Strategic Approach, which was adopted as a framework instrument for the future work of the Organization (see section 3).¹³⁰ In the past, decisions have also been made on the application of the precautionary approach, fishing for salmon in international waters and scientific research fishing, as well as the interpretation of the Convention.¹³¹

Under the Convention, WGC and NEAC have mandates to propose regulatory measures for fishing in the area of fisheries jurisdiction of a member of salmon originating in the rivers of other Parties, pursuant to article 8(b). In NAC, regulatory measures may be proposed for salmon fisheries under the jurisdiction of a member that harvests amounts of salmon significant to the other member, or another Party, in whose rivers that salmon originates, pursuant to article 7.1(b) and (c). NAC has not adopted any regulatory measures since 1986.

¹²⁹In 1984, the issue was raised in NAC whether the European Union could comment on proposals made by the members of the NAC, based on the origin of salmon caught in the NAC area. The issue was referred to a Working Group, but the issue was apparently resolved informally.

¹³⁰CNL(05)49.

¹³¹See <http://www.nasco.int/agreements.html>.

WGC and NEAC also provide a forum for consultation and co-operation concerning the conservation, restoration, enhancement and rational management of salmon stocks subject to the Convention. In the case of NAC, it provides a forum for consultation and co-operation with regard to activities that may be undertaken by one member and which would affect salmon originating in the rivers of the other member because, for example, of biological interactions.

In the past, the work of WGC and NEAC has largely focused on the adoption of regulatory measures for fishing. However, these Commissions have also considered a wider range of issues, in particular aquaculture, introductions and transfers, which has resulted in the adoption of a mixture of decisions, including resolutions, memorandum of understanding, and protocols.¹³² In recent years, the work of these Commissions has been eased because of the successful adoption of significant restrictions on fishing and, in the case of the West Greenland fishery, adoption of multi-annual measures. The restrictions have been necessary due to the declining abundance in salmon stocks, largely as a result of at sea mortality.

In exercising their functions, the Commissions are required to take into account the factors provided in article 9 of the Convention, including the best available information, namely advice from ICES and other appropriate scientific organizations, and measures taken and other factors, both inside and outside the Commission area, that affect the salmon stocks concerned. The Commissions are also required to adopt and apply a precautionary approach in decisions concerning the conservation, management and exploitation of salmon in order to protect the resource and preserve the environments in which it lives.¹³³ To this end, the Council has adopted a decision structure to assist in implementing the precautionary approach to the management of North Atlantic salmon.¹³⁴ The decision structure provides a basis for more consistent approaches to the management of exploitation throughout the North Atlantic range of the species.

In terms of decision-making procedures, article 13 of the Convention provides that regulatory measures proposed by a Commission are binding on their respective members 60 days after the date specified in the notification from the Secretary, or any later date determined by the Commission. The procedure for objections is provided in article 13.3, which allows any member in whose area of fisheries jurisdiction a regulatory measure would apply to lodge an objection within 60 days, in which case the measures does not become binding on any member. Procedures for withdrawing objections and for denouncing measures are also provided in article 13.

The Commissions may propose emergency regulatory measures, pursuant to article 13.5, which have effect prior to the expiration of the 60-day period provided in article 13.2. In that event, members of the Commission are required to make “best efforts” to implement the measure, unless there is an objection by a member within 30 days. In 1996, the Council agreed that this article would be interpreted in such a way that if an objection to an emergency regulatory measure was recorded within the 30 day period, then the measure

¹³² See, for example, NEA(97)12 and NAC(05)7.

¹³³ CNL(98)46, Agreement on Adoption of a Precautionary Approach.

¹³⁴ CNL31.332.

would fall and the obligation for the members of the Commission to make best efforts to implement the measure would cease to apply.¹³⁵

Article 10.7 of the Convention provides a procedure for calling meetings other than annual meetings. The rules of procedure of the respective Commissions also provide for taking votes by mail or by other means of textual communication.

In terms of transparency, the Rules of Procedure of the Council require the opening session of each meeting of the Council to be public. The Council and the Commissions may also decide to invite observers to participate in their meetings and may establish the terms and conditions for that participation. Significant efforts have been made to improve transparency in the work of the Organization, including through the NASCO website and the participation of stakeholders in meetings. Many of these improvements have been made in the context of the 'Next Steps' process (see section 3).

Analysis

The Convention contains different decision-making processes and functions for the Council and the three Commissions, reflecting the complex nature of the institutional arrangements in NASCO.¹³⁶

In this regard, the Convention provides an adequate framework for the adoption of binding regulatory measures by the three Commissions for fishing in areas of fisheries jurisdiction. In each case, membership in the Commissions is restricted and decisions are to be taken by unanimous vote. In contrast, the decision-making authority of the Council in this respect is limited to making "recommendations", which although not defined, would be of a non-binding character by implication. The framework allows for binding decisions to be made in the Commissions by those Parties with the principal interest in the stocks, while at the same time safeguarding the sovereign interests of these Parties within areas of fisheries jurisdiction.

At the same time, the Convention does not provide adequate functioning or procedures for the adoption of decisions on other areas of focus in NASCO, namely the protection and restoration of salmon habitat and aquaculture, introductions and transfers and transgenics. The authority of the Council is very general in this regard and limited to the making of recommendations "on matters concerning the salmon stocks subject to the Convention". It otherwise operates as a forum for consultation and co-operation "on matters concerning the salmon stocks in the North Atlantic Ocean", but this function would be restricted to a limited area outside Commission areas.

The Commissions also function in providing a forum for consultation and co-operation between their members, and decisions have been adopted on this basis concerning habitat

¹³⁵See Explanatory Notes, available at: www.nasco.int. The obligation of the Parties to use "best efforts" to implement an emergency regulatory measure would only apply during the 60 day period, barring any objection, following which the Parties would be obligated, pursuant to article 14, to take such action as may be necessary to make it effective.

¹³⁶The rules of procedure of the Council and the Commissions elaborate on these decision-making processes, with very little variation between them.

and aquaculture. However, the decision-making mandate of the Commissions in this regard is not clear, or explicit.

In practice, the Council has adopted a wide range of measures relating to fisheries management, habitat protection and aquaculture. Despite its limited decision-making mandate, the Council has evolved as the principal decision-making body in the Organization and it has adopted effective decisions and measures on all three areas of focus of the Organization, including in the context of the 'Next Steps' process.

These decisions of the Council and the Commissions reflect a widening disconnect between the mandates of these bodies, as provided in the Convention, and the actual work of the Organization. In addition, the decisions currently being taken by the Council in the context of the 'Next Steps' process reflect the cross-cutting nature of the challenges facing the Organization and the need for the possibility of binding decisions to be made in all three current areas of focus.

In terms of decision-making procedures, the Convention is somewhat unique in providing both a procedure for the lodging of objections to regulatory measures (article 13) and a requirement for unanimous decision-making in the work of the Commissions (article 11). In light of the latter requirement, it is not surprising that the objection procedure in article 13 has not been used in the history of the Organization. Practically speaking, the procedure would only be relevant in cases in which a quorum was established, but a member of a Commission was absent for a vote and later sought to object to a proposed regulatory measure.¹³⁷

In contrast, decisions of the Council that are required to be taken by a unanimous vote are not subject to the objection procedure. The Convention also allows for other decisions to be taken by the Council by a three-quarters majority, making a procedure for the lodging of objections more relevant.

If salmon stocks recover and the work of the Commissions is revived in that regard, it will be necessary for decisions on regulatory measures to continue to be taken on consensual basis, given the current membership and mandates of these bodies. In that event, consideration of improvements to the objection procedure would not seem to be practical, or useful.¹³⁸ However, in order to improve cooperation, consideration could be given to the development of a dispute settlement mechanism to provide for the resolution of any disputes concerning the conservation and management of salmon stocks.

Mindful of the current challenges facing the Organization, it would be useful to review the role and functions of the Council and consider an expansion of its decision-making mandate, as addressed in the assessment of article 4 of the Convention in section 4.3.2. More specifically, consideration could be given to vesting the Council with the authority to make binding decisions concerning matters within its mandate. If this is pursued, consideration

¹³⁷ It is noted that the practical effect of the requirement for a quorum in the NAC is that no vote could be taken unless both members were present.

¹³⁸ See, for example, article 23 of the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (SEAFO Convention).

should be given to the most appropriate decision-making process, drawing on the best practices of other RFMOs.¹³⁹

Recommendations

1. In light of the apparent need for binding decisions to be made by NASCO in all areas of focus, including for the protection and restoration of salmon habitat and aquaculture, introductions and transfers and transgenics, it is recommended that a review of the role and decision-making functions of the Council should be conducted, including the possibility of vesting it with binding decision-making authority in order to meet the current challenges facing the Organization.

2. At that time, NASCO should consider the best practices in other RFMOs on decision-making processes, including recent improvements in objection procedures.

7.3 Dispute settlement

The Convention does not currently include a procedure for the settlement of disputes, as is typically found in modern fisheries instruments.¹⁴⁰ Such a mechanism could help to encourage cooperation among the Parties on all matters concerning the conservation, restoration, enhancement and rational management of salmon stocks.

In the past, the Parties have been able to reach agreement on a wide range of issues without resort to such formal procedures, with some exceptions. These exceptions have concerned the adoption of regulatory measures by the Commissions for fishing in areas of fisheries jurisdiction.¹⁴¹ In these cases, additional procedures have been proposed, including informal mechanisms (e.g. working groups), or the convening of additional meetings, but have not been pursued.¹⁴² In the absence of regulatory measures, the Parties have seemingly been permitted to adopt unilateral measures for salmon fishing in these years.

In light of current restrictions on fishing, it is not anticipated that the Commissions will be required to adopt regulatory measures for the allocation of fishing opportunities in the near future. However, if salmon stocks recover, the need for such measures will be apparent.

In that event, it would be appropriate for NASCO to consider the adoption of a dispute settlement mechanism. In this regard, the Parties should have a clear obligation to settle their disputes by peaceful means, such as negotiation, inquiry, mediation, conciliation,

¹³⁹See, for example, article 23 of the SEAFO Convention and article 20 of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean.

¹⁴⁰See, for example, article 24 of the SEAFO Convention.

¹⁴¹See Report of the Second Annual Meeting of WGC (1985); Report of the Third Annual Meeting of NEAC (1986); Edinburgh, United Kingdom; Report of the Eighth Annual Meeting of WGC (1991); Report of the Ninth Annual Meeting of WGC (1992); Report of the Thirteenth Annual Meeting of WGC (1996).

¹⁴²See Report of the Second Annual Meeting of WGC (1985).

arbitration, or judicial settlement.¹⁴³ Where a dispute concerns a matter of a technical nature, the Parties could have the option to refer the dispute to an ad hoc expert panel.¹⁴⁴ Otherwise, the Parties should have the ability to seek the settlement of disputes through compulsory and binding procedures.

Recommendations

3. NASCO could consider the need for a binding and compulsory dispute settlement mechanism, particularly if salmon stocks recover and regulatory measures for the allocation of fishing opportunities become necessary.

8. INTERNATIONAL COOPERATION

8.1 Introduction

International cooperation is being addressed in a highly satisfactory manner, as recently reviewed in the Report of the 'Next Steps' Review Group.¹⁴⁵ It is apparent that the Organization works in a transparent manner, enjoys good relations with 35 accredited NGOs and many other intergovernmental organizations, as well as RFMOs and related networks. NASCO has also undertaken some recent public relations initiatives, which should be continued and expanded, as appropriate.

8.2 Transparency and public relations

8.2.1 Transparency

There are a number of actions in the Strategic Approach that are aimed at strengthening relations between the Council and stakeholders, all of which enhance cooperation in a clear and targeted manner.¹⁴⁶ These decisions involve:

- Solicitation of stakeholder input on standing or *ad hoc* working groups as appropriate;
- Continuation of support by the Council of broader stakeholder participation in the ISFA/NASCO Liaison Group;
- Periodic stakeholder dialogue meetings to improve outreach and education with regard to NASCO and its work and to seek information on ways to continue to improve the Organization's work; and
- Council encouragement of accredited NGOs and, as appropriate, other stakeholders to continue to improve their cooperation with NASCO.

¹⁴³See, for example, article 27 of United Nations Fish Stocks Agreement, or article 24 of the SEAFO Convention.

¹⁴⁴See, for example, article 29 of United Nations Fish Stocks Agreement, or article 24 of the SEAFO Convention.

¹⁴⁵CNL(11)12. Relevant decisions include decision numbers 7-11, 13-18 and 23, as discussed in the text.

¹⁴⁶Strategic Approach, Decisions 7-10.

Currently, observer status of NGOs applies to all plenary sessions of the Council and the Commissions, whether at annual meetings or inter-sessional meetings, and the Council and Commissions may solicit NGO and other stakeholder input to meetings of working groups and other subsidiary bodies. There are 35 accredited NGOs that now participate in most NASCO meetings, as described below.

Since 2007, the North Atlantic salmon farming industry has agreed to representation by accredited NGOs in the ISFA/NASCO Liaison Group, and the conditions governing this participation have been developed.¹⁴⁷ NGO representatives have also participated in the work of the ISFA/NASCO Liaison Group's Task Force.

Stakeholder dialogue meetings were held as part of the 'Next Steps' process during 2005 in London, UK and Portland, USA. Among the recommendations arising from these meetings¹⁴⁸ was the need for research on salmon at sea. No subsequent dialogue meetings have been held and the Report of the 'Next Steps' Review Group suggests that the Council may wish to consider holding further meetings in 2012 or 2013. The purpose of these meetings might be to report on developments since 2005, including the findings from the SALSEA Programme. In this regard, NASCO jointly organised a meeting for stakeholders in London in December 2011 on the findings of the SALSEA Programme and further meetings may be organised.

The Council has modified its protocols to provide greater opportunities for contributions from, and engagement with, its NGOs, most recently in 2006 by allowing statements by NGOs on all agenda items other than (finance and administration matters) before and after interventions by the Parties.¹⁴⁹ The NGOs now participate in all NASCO meetings (other than the Finance and Administration Committee and Heads of Delegations meetings), including those relating to the 'Next Steps' process, the IASRB and its Scientific Advisory Group (SAG), the ISFA/NASCO Liaison Group and the Steering Committee for the 2011 Salmon Summit. The NGOs have also played a central role in the Public Relations Group in developing NASCO's media strategy and in contributing funding to the SALSEA Programme. Until 2010, this Group was chaired by the NGO Chairman.

As described in the Report of the 'Next Steps' Review Group, most agenda items for both the Council and Commission meetings are no longer discussed in the meetings of Heads of Delegations. Initial discussion of all agenda items occurs within the Council and Commissions. Where agenda items are discussed at Heads of Delegations meetings, the decision and rationale is provided at the Council and Commission meetings.

Analysis

NASCO's initiatives to strengthen transparency and promote an inclusive approach with stakeholders in relation to its mandate and activities have been highly satisfactory, as reflected in the levels of participation and cooperation with other stakeholders and

¹⁴⁷SLG(07)12.

¹⁴⁸CNL(05)15.

¹⁴⁹Report of the 'Next Steps' for NASCO Review Group CNL(11)12.

consideration of future dialogue.¹⁵⁰ NASCO should be commended for its approach towards inclusive participation in meetings and for its transparency in proceedings.

As underscored in the Report of the 'Next Steps' Review Group:

“The NGOs have worked successfully together with NASCO Parties to facilitate much greater transparency in its work, notably the requirement for each jurisdiction to produce an implementation plan which now creates public accountability for wild salmon management around the North Atlantic. Close co-operation and constructive criticism are essential to help implement both vital research and practical salmon management measures aimed at conserving and restoring this iconic species.”

The stakeholder dialogue meetings appear to have been a useful tool in setting research priorities for NASCO. Such consultations should be considered for purposes designated by the Council, such as considering or monitoring the IPs and FARs and providing views on the implementation of recommendations in the present report. A similar process has been initiated by the GFCM, which established a task force that is holding five sub-regional consultations to seek views on, and recommend priorities for, the recommendations of its performance review.

The NASCO website on the whole promotes transparency and provides useful links. It is noted in this regard that the NGO accreditation of Greenpeace International has been suspended by the Council. It could be preferable to only include the NGOs that are actively accredited, or explain on the website why such accreditations have been suspended.¹⁵¹

Recommendations

1. The Council should consider whether it wishes to hold further stakeholder dialogue meetings in the jurisdictions of all relevant Members, *inter alia*, to report on developments, to consider or monitor the IPs and FARs and to discuss the implementation of the recommendations in the present report.
2. The NASCO website should show active NGOs, or explain why an NGO is referred to as “suspended”.

8.2.2 Public relations

A number of decisions in the Strategic Approach focused on the need and activities for NASCO to better promote its work and achievements,¹⁵² in particular:

¹⁵⁰ On future stakeholder dialogue meetings, see CNL(11)12 (for example, paras. 5.1 and 6.3. and Annex 3). Also see para. 2.1 of Annex 4 of WGFR(11)8.

¹⁵¹ The Working Group on Future Reporting also described issues in relation to the ISFA in the past (see para. 5.4 of WGFR(11)8).

¹⁵² Decisions 13-18.

- The Council will create a Public Relations Group;
- The Council will seek input from NASCO's accredited NGOs to the development of the Organization's media strategy;
- NASCO will develop and implement a clear public relations strategy, including the establishment of a public relations group, aimed at enhancing its profile and ensuring the most effective publicity for its work and achievements;
- The Secretariat will engage professional expertise to produce media products and to develop a more relevant, attractive, informative and interactive website;
- NASCO will develop links with educational programmes and establish the means to achieve mutual benefits from such alignment; and
- The Council will consider the need for additional reports to improve the public understanding of information relevant to NASCO's activities.

Accordingly, the Council established a Public Relations Group to develop a clear public relations strategy aimed at enhancing NASCO's profile and ensuring the most effective publicity for its work and achievements. This Group met only once and its report was presented to the Council in 2007.¹⁵³ However, the Council struggled to some extent with identification of the messages, its target audience and resource availability. A Sub-Group met during the annual meetings and worked by correspondence to further develop a media strategy and press releases.

Some NGOs with public relations experience have worked with NASCO through the Public Relations Group and its Sub-Group. The scope of a media strategy for the Organization has not been identified, but the Report of the 'Next Steps' Review Group points to good progress in redesigning the NASCO and IASRB websites.

In the late 2005 and early 2006, a pilot study to raise NASCO's profile was conducted with the involvement of Porter Novelli, a public relations firm. The Report of the 'Next Steps' Review Group elaborates on the strengths and weaknesses of this approach, particularly where journalists tended to be inaccurate or frame the issues in a way that could damage NASCO's reputation. Porter Novelli made recommendations for developing a longer term media strategy for NASCO and these were considered by the Public Relations Group, which identified main tasks in developing a public relations strategy.

In this context, the Report of the 'Next Steps' Review Group indicated that progress was being made towards developing the social and economic elements of the "State of the Salmon" report, but since then the focus has been on the development of the database on rivers.

Important progress has also been made in making publicly available the goals and outcomes of the 'Next Steps' process, including the publication of IPs and FARs by the Parties, allowing for presentation in Special Sessions of the IPs and FARs and the findings of review groups, including the FAR Review Groups and the publication of guidelines developed or reviewed in the context of the 'Next Steps' process.

¹⁵³CNL(07)16.

Analysis

The Panel endorses the decisions in the Strategic Approach that focused on the need and activities for NASCO to better promote its work and achievements, and recognizes a continuing need in this regard. Although the Public Relations Group has not met recently, its revitalization and strengthening, perhaps with new terms of reference, would be well positioned to develop a clear public relations strategy aimed at enhancing NASCO's profile and ensuring the most effective publicity for its work and achievements.

The Panel commends NASCO performance in implementing the decisions in the Strategic Approach on making publicly available the goals and outcomes in the IPs and the FARs. It is understood that performance in developing the IPs and FARs needs further improvement (see section 3). It could be useful to consider promoting their development in a public relations strategy.

In this regard, the Public Relations Group should consider what more could be done with a view to reaching a broader audience and raising NASCO's public profile in the context of the further development and implementation of a clear public relations strategy. Although an information officer could assist in this regard, it is considered that the creation of such a position would not be practical for a lean organization such as NASCO. A wide range of other options could be considered in this regard, as follows.

- Giving appropriate, transparent and continuous public profile to the outcomes of the IPs and FARs, especially measurable progress, could encourage the Parties to make such progress and set good examples for future action.
- The "Newsroom" site on the NASCO website consists largely of official statements and announcements. It could also be used to announce achievements of NASCO and its Parties from time to time, such as successes or new developments in restoration or enhancement, urgent new priorities for conservation and management salmon stocks and breaking enforcement news or emerging information in areas such as habitat or transgenics. Links to such news bulletins could appear on the home page as they are posted for a certain time period.
- Regarding educational programmes, the work of NASCO should be supported in developing links with educational programmes and the decision to establish a database of information about such programmes as a first step.¹⁵⁴ Although NASCO is not in the business of education, it could be useful to identify whether establishment of an education programme would support NASCO's outreach and public relations initiatives, or at least any contributions that could be made by NASCO to existing programmes relating to North Atlantic salmon, their habitat and enhancement. For example, outcomes of the SALSEA Programme could form part of the message. The messages should aim at presenting an integrated, international approach to the issues and their solutions and identify the stakeholders' role in enhancing positive results.

¹⁵⁴ See <http://www.nasco.int/links.html>.

The Public Relations Group would also be well positioned to identify tools that could be considered to deliver such messages, such as a short educational multimedia presentation (in key languages of NASCO members) or an educational interactive website game. Another tool could be to encourage major television networks or independent documentary makers to produce a documentary in cooperation with NASCO and the Parties that would encourage awareness and action by stakeholders.

The Panel endorses the sentiment in the Strategic Approach¹⁵⁵ that additional reports on the achievements of NASCO itself would be useful, such as an updated version of “NASCO’s Twenty-Year Milestones and Next Steps – A Vision for the Future”.

Recommendations

3. NASCO should take further steps to consider, develop and implement a clear public relations strategy, *inter alia*, through a revitalization and strengthening of the Public Relations Group, continued regularized cooperation with the NGOs expert in media relations and the Parties communications experts.

4. The Public Relations Group could build on the work already begun and develop a medium-term proactive communications strategy that sets out objectives, tasks and the responsibilities of NASCO and its partners. Some components of such a strategy should include the “State of the Salmon” report, progress made under IPs and FARs, development of additional reports on NASCO’s achievements, educational tools and further development of the “newsroom” site.

8.3 Relationship with non-Contracting Parties

Iceland, a former Contracting Party, withdrew from NASCO with effect from 31 December 2009 because of financial considerations, but has indicated that it intends to re-accede to the Convention when the economic situation improves. In the meantime, the relationship is positive.

The United States of America has indicated in their FAR on fisheries management that management of the fishery at St. Pierre and Miquelon¹⁵⁶ is significantly behind that of the mixed stock fishery off Greenland. Furthermore, there was very limited information exchange and a short time series of data on the biological characteristics of the fish caught in this fishery. Interest was expressed in increased opportunities to learn more about this fishery and to engage in cooperative discussions regarding its management and operation. In this regard, it did not appear that the management of the fishery in St. Pierre and Miquelon was consistent with the relevant NASCO agreements and guidelines and the precautionary approach. It was suggested that increased dialogue was needed to agree

¹⁵⁵ Decision 18.

¹⁵⁶ A self-governing territorial overseas collectivity of France and not directly a party to the Convention.

upon targets and a method for making decisions on this fishery and also to improve data collection.

The relationship between NASCO and non-Parties is indirectly but effectively carried out through cooperation with other RFMOs, both in the context of cooperation with other salmon organizations including the North Pacific Anadromous Fisheries Commission (NPAFC) and the Pacific Salmon Commission (PSC), and through the North Atlantic Regional Fishery Management Organizations (NARFMOs) and the Regional Fishery Bodies Secretariats Network (RSN).

Concerning possible high seas IUU fishing for North Atlantic salmon by non-Parties, no such activity has been reported for many years, based on surveillance carried out during part of the year. In the early 1990's, NASCO took successful action in this regard, including through the adoption of a Protocol Open for Signature by States Not Parties to the Convention.¹⁵⁷ The activities of vessels registered to non-Parties desisted after diplomatic demarches were made.

As noted in section 6, NASCO does not formally cooperate in this regard with other North Atlantic organizations such as NEAFC and NAFO, which have robust MCS mechanisms in place, including observer programmes, boarding and inspection and centralized vessel monitoring systems that could assist in detecting the occurrence of any such IUU fishing activities.

Analysis

Although concerns have been expressed over limited surveillance activity, it appears that there are essentially no high seas fishing activities for North Atlantic salmon by vessels registered to non-Parties. Any such IUU fishing activities would likely be detected if cooperative surveillance arrangements were entered into with other RFMOs.

Mindful of the NASCO mandate over enhancement and restoration, as well as the need to take an ecosystem approach to fisheries management, a need for relationships with non-Contracting Parties may arise in future concerning these areas.

It would be a positive step forward to increase dialogue with St. Pierre and Miquelon to agree upon targets and a method for making decisions on their salmon fishery and also to improve data collection.

Recommendations

5. If IUU fishing is detected in the future, NASCO should consider whether relationships could be forged with non-Parties to address the issue. Other areas of its mandate could also be the subject of such discussions, such as enhancement and restoration. A strategy could be considered involving action in accordance with international law to address and deter

¹⁵⁷CNL(92)52.

the undermining of the objective of the Convention.

6. Iceland should be encouraged to re-accede to the Convention.

7. Dialogue with St. Pierre and Miquelon should be increased in order to agree upon targets and a method for making decisions on their salmon fishery and also to improve data collection.

8.4 Cooperation with other international organizations

A review prepared by the Secretariat in 2006 for consideration by Council¹⁵⁸ noted that NASCO's broad remit meant that there were many potential organizations with which it could, and should, cooperate subject to budgetary considerations.

NASCO had established a good working relationship with ICES, which is subject to a Memorandum of Understanding. Improvements have been made to the timeliness and presentation of the scientific advice, through consultations with ICES. As noted above in section 8.3, NASCO cooperates effectively with other RFMOs, and it also cooperates through the FAO Committee on Fisheries and in United Nations fisheries-related meetings.

The Council agreed that this approach should continue, and that where specific issues arise NASCO should seek cooperation from other relevant international organizations so as to share information on common problems, raise the profile of NASCO with these other international organizations, address problems of fisheries for other species affecting Atlantic salmon and share experience of working methods.

Consultations have recently been held with OSPAR and a memorandum of understanding for cooperation on issues of mutual interest is currently being developed. OSPAR concluded a similar memorandum of understanding with NEAFC, and the Panel encourages such cooperation.

NASCO fostered cooperation through co-convening with ICES a major international summit 'Salmon at Sea: Scientific Advances and their Implications for Management' in October 2011. The conclusions of this Summit indicated the urgent need for strengthening actions and measures relating to salmon stocks.¹⁵⁹

Representatives of the following intergovernmental organizations have participated in working groups or meetings: International Baltic Sea Fishery Commission (IBSFC), NPAFC, EIFAAC and the North Atlantic Marine Mammal Commission (NAMMCO).

¹⁵⁸CNL(06)15. Also see Decision 12 of the Strategic Approach, which required the Council to review its relationships with other international organizations and explore areas of mutual interest.

¹⁵⁹At the Summit scientists confirmed that wild Atlantic salmon were dying at sea in alarming numbers and that southern stocks including some in North America and Europe were threatened with extinction (also see <http://www.nasco.int/sas/pdf/Summit%20Presentations/Take%20Home%20Messages.pdf>).

More broadly, the NASCO Secretariat has cooperated with other RFMOs in the North Atlantic by participating in meetings of NARFMOs. These meetings are comprised of the Secretariats of ICCAT, NAMMCO, NASCO and NEAFC,¹⁶⁰ and they convene every one or two years to exchange information and experience on issues of interest to all these organizations. The NASCO Secretariat has also actively participated in meetings of the RSN, held biennially at the time of the meetings of the FAO Committee on Fisheries.

Analysis

The Panel finds that cooperation is highly satisfactory and has no recommendations.

8.5 Special requirements of developing States

NASCO Parties do not include developing States. The panel has no recommendations in this regard.

9. FINANCIAL AND ADMINISTRATIVE ISSUES

9.1 Introduction

The Convention sets out the financial requirements of the Organization in article 16. According to this article, the Secretary shall transmit a draft budget to the Parties, together with a schedule of contributions, not later than 60 days before the meeting of the Council at which the budget is to be considered. The Council adopts the budget at the annual meeting.

The Organization is funded by contributions from the Parties, calculated by the following formula:

- 30% of the budget divided equally among the Parties; and
- 70% of the budget divided among the Parties in proportion to their nominal catches of salmon subject to the Convention in the calendar year ending not more than 18 months and not less than 6 months before the beginning of the financial year.

The Council has established a Finance and Administration Committee and has adopted Financial Rules. Financial rule 3.1 provides that the form of the budget shall be decided by the Council upon the advice of the Finance and Administration Committee.

Financial rules 6.1 and 6.2 refer to the establishment of a General Fund, a Working Capital Fund and a Contractual Obligation (formerly Stabilisation) Fund. Financial rule 6.3 sets a limit on the funds. Any budgetary surplus after the funds reach these limits is to be used to offset Parties' contributions in the next financial year.

¹⁶⁰ The International Baltic Sea Fisheries Commission also participated when it was in existence.

In rule 7.1, contributions other than regular contributions from the Parties are addressed, including voluntary contributions from Parties or from non-Parties if the Council accepts that the purposes of the contribution are consistent with the policies, aims, and activities of the Organization.

9.2 Availability of resources for activities

The Parties generally make their contributions on time, although there have been rare cases where payment has been made late in the year. On one occasion in the early 1990s, a Party did not pay in the contribution year, but paid in full the following year. There has never been a default.

The total contributions of the Parties in the last five years are as follows:

2012 - 587,000
2011 - 570,270
2010 - 562,300
2009 - 580,030
2008 - 582,180

In addition, the Secretariat purchased the headquarters property early when setting up the Secretariat. By acquiring the property in Edinburgh, UK the Secretariat has been able to keep contributions of the Parties on a stable level, which is moderate compared to other regional organizations.

It should, however, be noted that the budget does not cover the costs of necessary scientific research. An inventory of existing research indicates that NASCO's Parties already spend in the region of £4.6 million (€6.5 million) on research on salmon at sea annually.

Research on salmon at sea is the responsibility of the IASRB, which comprises representatives of NASCO Parties and NGOs. The Secretary of NASCO is also the Secretary of IASRB. The IASRB was able to raise the necessary funding from the public and private sectors, which made it possible to complete marine surveys successfully in the Northwest and North-East Atlantic. For example, while the main funding for the SALSEA-Merge project came from the European Commission under the 7th Framework Programme for Research and Technological development, funding was also provided by the partner organizations, the Total Foundation and the Atlantic Salmon Trust.

The SALSEA Programme ensures a thorough overview of factors which may affect the mortality of Atlantic salmon and the opportunities to counteract them. It contains a comprehensive mix of freshwater, estuarine, coastal and offshore elements, ensuring an overview of factors that may affect the marine mortality of Atlantic salmon. It is a very ambitious programme that will take many years to complete, but it encompasses all of the key areas where additional scientific knowledge is required. It remains to be seen whether the SALSEA Programme should be continued or if the assessment of sea mortality of salmon will become a part of the advice from ICES.

The success of the programme depended on initial development work (sampling gear, genetic stock identification techniques, migration models and scale analysis techniques) and this work formed part of the SALSEA Programme. Listed in Table 8 below are indicative costings for the priority areas of the SALSEA Programme.

Table 8: Indicative costings of the SALSEA Programme

Indicative costings of the SALSEA Programme (Work Packages 1 and 3)	
Work Package 1 – Supporting Technologies	£
Work Package 1 Task 1 Genetic tagging to determine stock origin	1,500,000
Work Package 1 Task 2 Sampling equipment evolution	330,000
Work Package 1 Task 3 Signals from Scales	100,000
Sub-total	1,930,000
Work Package 3 – Oceanic Distribution and Migration	
Work Package 3 Task 1 Distribution and Migration Mechanisms	25,000
Work Package 3 Task 2 A Common Approach	25,000
Work Package 3 Task 3 Salmon at Sea - two years of marine surveys	5,600,000
Work Package 3 Task 4 Distribution and Migration	180,000
Sub-Total	5,830,000
Total:	7,760,000

Analysis

Even with a relatively small budget, there is no indication that the Secretariat or the Organization are not properly funded to meet its obligations under the Convention. The purchase in 1984 of the NASCO Headquarters Property in Edinburgh has had a very positive impact on the NASCO budget, as it provides a net income to the Organization.

In comparing the budgets of NEAFC in London and NASCO in Edinburgh, which both have four full time staff members and similar levels of activity, it is noted that contributions from Contracting Parties in NEAFC are approximately £ 1.3 million, compared to £ 0.6 million in NASCO. The difference is significant, even considering that NEAFC's subscription to ICES is much higher than NASCO's and London is more expensive than Edinburgh.

NASCO has shown that if the need arises there are possibilities to seek funding outside the research budgets of the Parties and as a consequence outside the budget for ICES-coordinated research.

Given the suitability of current arrangements, there are no recommendations on the availability of resources for activities.

9.3 Efficiency and cost-effectiveness

Until recently, NASCO had a heavy meeting schedule, including statutory meeting activity of the Council and three Commissions, as well as activity in the 'Next Steps' process, including stakeholder meetings on several levels (also see section 3). In addition, stakeholder input is solicited on standing or *ad hoc* working groups as appropriate.

There is also support for broader stakeholder participation in the ISFA/NASCO Liaison Group. Periodic conduct stakeholder dialogue meetings to improve outreach and education with regard to NASCO and its work and to seek information on ways to continue to improve the Organization's work is also solicited (also see section 8).

The setting up of the SALSEA Programme and its funding has also put a considerable burden on the Secretariat.

Analysis

The meeting activity in NASCO is quite significant and has included full participation of NGOs in the work of NASCO.

As part of the 'Next Steps' process, and in light of the complexity of the NASCO meeting schedule, including the structure, frequency and location of NASCO's annual meetings, the Secretariat has been requested to prepare a paper considering the costs and benefits of different meeting options and changes to the agenda for consideration by the Council.

It will be important for the Council to consider the implications of the NASCO meeting schedule in order to avoid excess costs in travelling to meetings and duplication in matters that are considered in meetings.

The Panel does not find any basis for recommending changes in the way NASCO handles its finances and meeting schedule, but encourages these issues to be considered in the context of the 'Next Steps' process.

APPENDIX I Criteria of the External Performance Review

Criteria for the External Performance Review

(See CNL(11)44, Terms of Reference for an External Performance Review of NASCO's Work, Annex 1)

	<i>Area</i>	<i>General criteria</i>	<i>Detailed criteria</i>
1	<i>Conservation and management</i>	Status of living marine resources	<ul style="list-style-type: none"> • Status of marine living resources under the purview of NASCO. • Trends in the status of those resources. • Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted marine living resources. • Trends in the status of those species.
		Ecosystem approach	<ul style="list-style-type: none"> • Extent to which NASCO decisions take account of and incorporate an ecosystem approach to fisheries management.
		Data collection and sharing	<ul style="list-style-type: none"> • Extent to which NASCO has agreed formats, specifications and timeframes for data submissions. (e.g. as set out in Annex 1 of the 1995 UN Fish Stocks Agreement). • Extent to which NASCO Contracting Parties, individually or through NASCO, collect and share complete and accurate data concerning marine living resources and other relevant data in a timely manner, including analysis of trends in fishing activities over time. • Extent to which fishing and research data and fishing vessel and research vessel data are gathered by NASCO and shared among Parties. • Extent to which NASCO is addressing any gaps in the collection and sharing of data as required.
		Quality and provision of scientific advice	<ul style="list-style-type: none"> • Extent to which NASCO produces or receives the best scientific advice relevant to the marine living resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities, on the marine ecosystem.
		Adoption of conservation and management measures	<ul style="list-style-type: none"> • Extent to which NASCO has adopted measures based on the best scientific advice available to ensure the long-term conservation and sustainable use of marine living resources in the Convention Area. • Extent to which NASCO has applied a Precautionary Approach as set forth in Article 6 of the 1995 UN Fish Stocks Agreement, including the application of precautionary reference points.

			<ul style="list-style-type: none"> • Extent to which consistent/compatible management measures have been adopted (e.g. as set out in Article 7 of the 1995 UN Fish Stocks Agreement). • Extent to which NASCO successfully allocates fishing opportunities consistent with the NASCO Convention and Article 11 of the 1995 UN Fish Stocks Agreement. • Extent to which NASCO has moved toward the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries. Extent to which NASCO has taken due account of the need to conserve marine biological diversity and minimize harmful impacts of fishing activities and research on living marine resources and marine ecosystems. • Extent to which NASCO and its Parties have adopted and are implementing effective rebuilding plans for depleted or overfished stocks including guidance for stocks under moratoria.
		Capacity management	<ul style="list-style-type: none"> • Extent to which NASCO has taken actions to prevent or eliminate excess fishing capacity and effort. • Extent to which NASCO monitors the levels of fishing effort, including taking into account annual notifications of participation by Parties.
2.	<i>Compliance and enforcement</i>	Flag State duties	<ul style="list-style-type: none"> • Extent to which NASCO Parties are fulfilling their duties as flag States under the NASCO Convention, pursuant to measures adopted by NASCO, and under other international instruments, including, <i>inter alia</i>, the 1982 Law of the Sea Convention, 1995 UN Fish Stocks Agreement and the 1993 FAO Compliance Agreement, as applicable.
		Port State measures	<ul style="list-style-type: none"> • Extent to which NASCO has adopted measures relating to the exercise of the rights and duties of its Parties as port States, as reflected in Article 23 of the 1995 UN Fish Stocks Agreement, as well as the minimum standards set out in the 2009 FAO Agreement on Port State Measures to Combat IUU Fishing. • Extent to which these measures are effectively implemented.
3.	<i>Decision-making and dispute settlement</i>	Decision-making	<ul style="list-style-type: none"> • Efficiency of NASCO in addressing critical issues in a timely and effective manner. • Extent to which NASCO has transparent, consistent and adequate decision-making procedures that facilitate the adoption of conservation and management measures in a timely and effective manner.
		Dispute settlement	<ul style="list-style-type: none"> • Extent to which NASCO has established adequate mechanisms for resolving disputes.
4.	<i>International cooperation</i>	Transparency	<ul style="list-style-type: none"> • Extent to which NASCO is operating in a transparent manner, taking into account Article 12 of the 1995

			<p>UN Fish Stocks Agreement.</p> <ul style="list-style-type: none"> • Extent to which NASCO decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion.
		Relationship with non-NASCO Parties	<ul style="list-style-type: none"> • Extent to which non-NASCO Parties have undertaken fishing activities in the NASCO Regulatory Area. • Extent to which NASCO facilitates cooperation with non-NASCO Parties, including encouraging non-NASCO Parties to become Parties or to implement NASCO conservation and management measures voluntarily. • Extent to which NASCO provides for action in accordance with international law against non-NASCO Parties undermining the objective of the Convention, as well as measures to deter such activities.
		Cooperation with other international organizations	<ul style="list-style-type: none"> • Extent to which NASCO cooperates with Regional Fisheries Management Organizations and other international organizations.
5.	<i>Financial and administrative issues</i>	Availability of resources for activities	<ul style="list-style-type: none"> • Extent to which financial and other resources are made available to achieve the aims of NASCO and to implement NASCO's decisions. • Extent to which the schedule and organization of the meetings could be improved.
		Efficiency and cost effectiveness	<ul style="list-style-type: none"> • Extent to which NASCO is effectively managing human and financial resources including those of its Secretariat.

APPENDIX II Compendium of Recommendations

NASCO 'Next Steps' Process

1. The 'Next Steps' process has succeeded in undertaking a comprehensive and critical review of the work of the Organization to date and in enhancing efforts on the current areas of focus of the Organization. This progress should continue, based on the Strategic Approach, which has provided a comprehensive framework for the work to be undertaken and for improvements to be made in the implementation of NASCO Agreements.
2. In the next reporting cycle, the Parties should continue their efforts to implement the decisions and to address the issues identified in the Strategic Approach. It will be important for the second cycle to address areas identified in the first cycle of the 'Next Steps' process for additional action. Consideration should be given to convening an FAR special session on this topic. Progress on the socio-economic aspects of Atlantic salmon and initiatives for endangered populations is also encouraged.
3. In terms of reporting, the next cycle should focus on assessing the effectiveness of the measures taken by the Parties. The IPs should contain clearly described identifiable, measurable outcomes and timescales. The Parties are encouraged to prepare IPs and FARs in a timely fashion, including through the possibility of electronic filing.
4. In the long-term, the 'Next Steps' process should consider cross-cutting issues, such as climate change. It should also consider conducting a review of the functions and role of the Council including the possibility of vesting it with binding decision-making authority.

Convention on the Conservation of Salmon in the North Atlantic Ocean

1. Where they are not reflected, the relevant principles expressed in the United Nations Fish Stocks Agreement and other instruments, including the Code of Conduct, should be expressly adopted in NASCO's instruments and in the context of the 'Next Steps' process, and be considered for inclusion in potential revisions of the Convention.
2. If IUU fishing by vessels registered to non-Parties becomes an issue in the future, NASCO should consider taking measures consistent with the Port State Measures Agreement.
3. Any strategy would have to take account of the existing NEAFC port control system and EU Resolution 1005/2008.
4. The need for measures or a mechanism to combat IUU fishing in the NASCO area of application should be monitored and as appropriate developed, including through cooperation with relevant RFMOs which already have in place MCS systems, in which case the IPOA-IUU should serve as a basis for such measures or mechanism.
5. Review the Technical Guidelines on the Ecosystem Approach to Fisheries with a view to determining whether EAF management plans are needed.

6. Review the International Guidelines on By-catch Management and Reduction of Discards with a view to developing a strategy to promote the application of by-catch measures in NASCO, including through all of its Commissions.
7. Considering that the NASCO Convention does not adequately reflect current applicable law and practice, it should be reviewed with a view to strengthening and modernizing the legal mandate of NASCO and the obligations of the Parties.
8. In parallel, or as an alternative, it is recommended that other options be considered for such strengthening and modernization, such as agreement on a legally-binding protocol.
9. As a first step, Parties should consider the legal issues that should be addressed and the mechanism that would best effect the modernization of NASCO. To assist such a review, an indicative framework of provisions in an updated instrument is provided in section 4.3.3.
10. The preamble of the Convention should be broadened and updated to reflect current priorities.
11. Key definitions should be agreed under the Convention, *inter alia*, to facilitate harmonize application and implementation.
12. The application of the Convention to salmon beyond areas of fisheries jurisdiction and to activities within fisheries jurisdiction should be more precisely defined so that the legal obligations of the Parties are clear.
13. Consideration should be given to whether the Convention should apply to “related activities”.
14. Application of international law to the interpretation and implementation of the Convention should be updated and specified.
15. A duty of the Parties to apply the Convention in a fair, transparent and non-discriminatory manner should be considered.
16. Parties should consider agreeing on a set of guiding principles to be used in implementing the Convention, taking into account the Next Steps process.
17. Mindful that the NASCO areas of focus have expanded beyond the management of salmon fisheries, Parties should consider the need for provisions relating to the duties of non-Parties to ensure their nationals cooperate in the implementation of the Convention and the measures that Parties may/must take to address the failure to cooperate or apparent adverse effects by their own nationals.
18. The Parties could consider updating the term “fisheries jurisdiction” with “exclusive economic zone”.

19. The objectives of the Convention, and of the Organization, are fundamental for the decisions and legal obligations of the Parties. These should be reviewed and updated as appropriate.
20. The institutional structure should be reviewed and amended as appropriate to include subsidiary bodies and a Secretariat, as well as rules for appointment of a Secretary and the duties of the Secretary. Authority and procedures for the establishment of *ad hoc* bodies should be provided.
21. Council's functions should be reviewed with a view to designating a more pro-active role suitable for addressing current areas of focus and cross-cutting issues and allow for international relations with a broad range of relevant organizations. The functions should also be expanded, as appropriate, taking into account current and possible future activities.
22. The decision-making authority of the Council, both binding and advisory, should be considered and clearly stated. Areas in respect of which recommendations or other forms of decision may be made should be reviewed. Provision of a binding decision-making mechanism in instruments, such as resolutions or protocols under specified circumstances, is encouraged.
23. It is recommended that, as appropriate, consideration be given to adoption of rules relating to the establishment of NASCO subsidiary and *ad hoc* bodies.
24. The functions of the NAC should be reviewed and updated, together with the other obligations under article 7. The functions should, to the extent necessary, be harmonized with those of the WGC and the NEAC and complement those of the Council.
25. The functions of WCG and NEAC should be reviewed and updated and, to the extent necessary, harmonized with those of NAC and the Council.
26. The considerations for the Commissions to take into account in exercising their functions should be reviewed, expanded and updated. In particular, the considerations should take into account any functions of the Commissions that may be updated, the challenges described in the Strategic Approach, NASCO guidelines, agreements, resolutions and regulatory measures and advice from relevant organizations.
27. It is recommended that the provisions of article 10 be reviewed and updated to reflect current membership, practice and management needs.
28. The description of the functions of the Secretary in article 12 should be reviewed, expanded and modernized to reflect actual practice. This can be elaborated in rules of procedure.
29. The regulatory and other measures reflecting the scientific advice should continue to be set and, in this regard, efforts to develop a risk framework for the Faroese fishery are encouraged.

30. Consideration should be given to empowering the Council to take decisions that are binding on the Parties, as appropriate in the form of resolutions, protocols or other.

31. The duties of Parties to implement the Convention and ensure compliance with it by their nationals should be reviewed and strengthened, particularly in the context of current areas of focus of the Organization.

32. Obligations for Parties to provide information should be reviewed and updated, consistent with the recommendations of the 'Next Steps' Review Group and the Working Group on Future Reporting. The type of information required by the Organization to meet the challenges identified in the 'Next Steps' process should be prioritized and identified, and information requirements concerning outcomes of actions taken to implement NASCO programmes or decisions should be required.

33. NASCO should consider the need for a binding and compulsory dispute settlement mechanism.

34. It is recommended that the indicative framework for a NASCO Convention in section 4.3.3 be reviewed as a whole, and options for proceeding be considered, including identification of the mechanism and priority issues, as appropriate.

35. The Panel strongly recommends that the Convention be reviewed and revised along the lines shown in the indicative framework, but other mechanisms may be considered, in addition to or in the alternative, including agreement through binding protocols, Council decisions or other.

Conservation and Management

1. The information in the river database should be compared with other information on the state of the river systems, for example, the annual ICES advice and the information on habitat estimates.

2. NASCO should ensure that the precautionary approach is used to the same extent in managing all impacts of human activity on the full life-cycle of salmon in rivers, estuaries, coastal areas and the open ocean.

3. NASCO should ensure that the WSSD-JPOI commitment to maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis, where possible not later than 2015, is taken into account, including in the context of the 'Next Steps' process.

4. Noting that NASCO has, in the SALSEA Programme, addressed the problem of estimating sea mortality, it is important to cover the sea areas stretching from estuaries to the high seas, the phase of the life cycle where the salmon leaves natal waters, to the same extent as other phases of the life cycle.

5. WGNAS should heed the advice given by the ICES Review Group, especially to estimate post-smolt survival.
6. The issues and recommendations raised by WGNAS in 2011 should be addressed when it meets in 2012.
7. Through the 'Next Steps' process, NASCO has addressed some of the ambiguities or inconsistencies in its instruments relating to fisheries management. In future reporting, information should be provided by the Parties on the interplay between stock conservation needs and incorporation of social and economic factors in decision-making, for both single and mixed-stock fisheries. In particular, clear indications should be given of how decisions were taken to permit exploitation of stocks known to be below their reference points, where information on stock status was lacking, and the consequences of these decisions for stock rebuilding.
8. The Parties are encouraged to report on issues relating to the management of salmon fisheries in a prompt and timely fashion.
9. As recommended by the 'Next Steps' Review Group, there is a need for further progress to be made in the management of salmon fisheries as part of the next cycle of the 'Next Steps' process.
10. The Parties are encouraged to report on issues relating to the protection and restoration of salmon habitat in a timely fashion.
11. As recommended by the 'Next Steps' Review Group, there is a need for further progress to be made in the protection and preservation of salmon habitat as part of the next cycle of the 'Next Steps' process.
12. If there is to be a balance between measures aimed at ending mixed stock fisheries in the areas beyond fisheries jurisdiction and measures ending mixed stock fisheries within fisheries jurisdiction, NASCO should aim at managing mixed-stock fisheries in the North Atlantic to protect the weakest of the contributing stocks.
13. Additional progress is needed towards achieving the international goals for sea lice and containment.
14. As recommended by the FAR Review Group, there is a need for further progress to address the impacts of aquaculture, introductions and transfers and transgenics as part of the next cycle of the 'Next Steps' process.
15. The Parties are encouraged to report on issues relating to aquaculture, introductions and transfers and transgenics in a full and timely fashion.
16. Sea mortality should be further investigated in relation to all phases from the time the salmon leaves natal waters.

17. Observer programs on and screening of landings of pelagic vessels fishing in seasons and areas where salmon make feeding migrations should be continued.

18. It is recommended that further efforts be made to address the issue of *Gyrodactylus salaris* in the context of the NASCO 'Next Steps' process.

19. Further exchange of information among the jurisdictions through the development of IPs and FARs, as appropriate, should be welcomed.

Compliance and Enforcement

1. The 'Next Steps' process has been an effective mechanism to improve compliance and enforcement in NASCO, in large part due to the expanding and evolving role of the Council. The Organization is encouraged to continue these efforts to further improve compliance and enforcement and promote the conservation, restoration, enhancement and rational management of salmon stocks.

2. Despite progress in addressing illegal and unreported fishing within areas of fisheries jurisdiction, high levels continue to be reported. Further efforts are encouraged to address this issue, including through enhanced reporting procedures and logbook schemes.

3. The Parties are encouraged to continue to report on these matters in the next cycle of the 'Next Steps' process. Implementation plans should include reporting on estimates of unreported catches and measures taken to reduce such catches. Timely reporting is essential so that all relevant information is available during assessments.

4. Since difficulties in minimising and estimating unreported catches remain a common challenge for the Parties, consideration should be given to convening a technical meeting to exchange information and best practices on the methods used to calculate unreported catches. It would also be useful, given the range of approaches by the Parties to addressing illegal and unreported catches, to consider the development of best practices and consolidated guidelines.

5. NASCO should consider enhancing its current surveillance efforts by requesting the cooperation of NEAFC and NAFO in reporting on any suspected IUU fishing activities for salmon in the area of the Convention that may be detected in their MCS operations.

6. If IUU fishing activities for salmon in the area of the Convention are discovered, the Organization should take appropriate and proportionate measures to address the problem, including strengthening the NASCO surveillance programme, as appropriate.

Decision-making and Dispute Settlement

1. In light of the apparent need for binding decisions to be made by NASCO in all areas of focus, including for the protection and restoration of salmon habitat and aquaculture, introductions and transfers and transgenics, it is recommended that a review of the role and decision-making functions of the Council should be conducted, including the possibility of

vesting it with binding decision-making authority in order to meet the current challenges facing the Organization.

2. At that time, NASCO should consider the best practices in other RFMOs on decision-making processes, including recent improvements in objection procedures.

3. NASCO could consider the need for a binding and compulsory dispute settlement mechanism, particularly if salmon stocks recover and regulatory measures for the allocation of fishing opportunities become necessary.

International Cooperation

1. The Council should consider whether it wishes to hold further stakeholder dialogue meetings in the jurisdictions of all relevant Members, *inter alia*, to report on developments, to consider or monitor the IPs and FARs and to discuss the implementation of the recommendations in the present report.

2. The NASCO website should show active NGOs, or explain why an NGO is referred to as “suspended”.

3. NASCO should take further steps to consider, develop and implement a clear public relations strategy, *inter alia*, through a revitalization and strengthening of the Public Relations Group, continued regularized cooperation with the NGOs expert in media relations and the Parties communications experts.

4. The Public Relations Group could build on the work already begun and develop a medium-term proactive communications strategy that sets out objectives, tasks and the responsibilities of NASCO and its partners. Some components of such a strategy should include the “State of the Salmon” report, progress made under IPs and FARs, development of additional reports on NASCO’s achievements, educational tools and further development of the “newsroom” site.

5. If IUU fishing is detected in the future, NASCO should consider whether relationships could be forged with non-Parties to address the issue. Other areas of its mandate could also be the subject of such discussions, such as enhancement and restoration. A strategy could be considered involving action in accordance with international law to address and deter the undermining of the objective of the Convention.

6. Iceland should be encouraged to re-accede to the Convention.

7. Dialogue with St. Pierre and Miquelon should be increased in order to agree upon targets and a method for making decisions on their salmon fishery and also to improve data collection.