

North Pacific Anadromous Fish Commission (NPAFC)

Performance Review Panel

Report

10 September 2010

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List of Abbreviations and Acronyms

| | |
|----------|---|
| APFIC | Asia-Pacific Fishery Commission |
| CCCC | Climate Change and Carrying Capacity program of PICES |
| CNM | Cooperating non-member |
| CSRS | Committee on Scientific Research and Statistics of NPAFC |
| EECM | Enforcement Evaluation and Coordination Meetings of NPAFC |
| EEZ | Exclusive Economic Zone |
| ENFO | Committee on Enforcement of NPAFC |
| EPWG | Enforcement Procedures Working Group of NPAFC |
| F&A | Committee on Finance and Administration of NPAFC |
| FAO | Food and Agriculture Organisation of the United Nations |
| FR | Financial Rules of NPAFC |
| FSA | 1995 United Nations Fish Stocks Agreement |
| HOD | Heads of Delegation of NPAFC |
| HSDN | High Seas Drift Netting |
| IATTC | Inter-American Tropical Tuna Commission |
| ICCAT | International Commission for the Conservation of Atlantic Tunas |
| ICES | International Council for the Exploration of the Seas |
| IIS | Integrated Information System |
| INPFC | International North Pacific Fisheries Organisation |
| IOC | Intergovernmental Oceanographic Commission |
| IPHC | International Pacific Halibut Commission |
| IPOA-IUU | FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing |
| IUU | Illegal, Unreported and Unreported Fishing |
| JOICG | Joint Operations Information Coordination Group |
| LOSC | 1982 United Nations Convention on the Law of the Sea |
| MCS | Monitoring Control and Surveillance network |
| MOU | Memorandum of Understanding |
| NASCO | North Atlantic Salmon Conservation Organisation |
| NCP | Non-contracting Parties |
| NPAFC | North Pacific Anadromous Fish Commission |
| NPCGF | North Pacific Coast Guard Forum |
| PICES | North Pacific Marine Science Organisation |
| PSC | Pacific Salmon Commission |
| RFMO | Regional Fisheries Management Organisation |
| RoP | Rules of Procedure of NPAFC |
| RPCG | Research Planning and Coordinating Group of the CSRS |
| SR | Staff Rules of NPAFC |
| SSC | Science Sub-committee of the CSRS |
| TCC | Technical Committee on Compliance of the WCPFC |
| UNESCO | United Nations Education, Scientific and Cultural Organisation |
| UNGA | United National General Assembly |
| WCPFC | Western and Central Pacific Fisheries Commission |

Executive Summary

At its 15th Annual Meeting (2007) the North Pacific Anadromous Fish Commission (NPAFC) decided to undertake a performance review of the organisation to assess the Commission's performance relating to the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, Article 66 of the United Nations Convention on the Law of the Sea relating to anadromous stocks, and other relevant international instruments. At its 16th Annual meeting in 2008 it was agreed that the Review Panel would consist of 5 members of NPAFC (representing the Chairs of the three Standing Committees plus two other representatives for national balance), plus two external members with expertise in legal and scientific matters in the North Pacific. Detailed criteria were adopted for the review as set out in Appendix 1. Due to budgetary constraints the review was postponed for one year. The Performance Review Panel met during the 17th Annual Meeting of NPAFC in Niigata, Japan, in November, 2009, and subsequently conducted its work by correspondence.

This Performance Review report is organised into 5 chapters, including specific chapters assessing the performance of the Commission based on the functioning of its three standing committees as required by the review criteria. Chapter 1 provides the geographic, historical and legal background and context of the NPAFC; Chapter 2 reviews conservation of anadromous stocks as conducted by the Committee on Scientific Research and Statistics; Chapter 3 reviews enforcement activities as conducted by the Committee on Enforcement; and Chapter 4 reviews financial and administrative activities conducted by the Committee on Finance and Administration. A concluding chapter, Chapter 5, contains general comments and a consolidated list of the Performance Review Panel's recommendations for easy reference.

Overall, the NPAFC has been a success, meeting most of its convention objectives. In particular, the NPAFC has benefitted from the fact that soon after the Convention was adopted, directed and indirect high seas fishing for anadromous stocks by the Parties was virtually eliminated. Since then, the NPAFC has also largely succeeded in eliminating high seas drift net fishing by non-contracting parties to the Convention which directly or indirectly target anadromous fish. The NPAFC has also succeeded in achieving and maintaining an extremely high degree of collegiality, characterized by its cooperative nature and the importance of social interactions within its committees. It is in these enviable successes, however, that the challenges lie for the NPAFC to find a continuing role for itself and to ensure that its remarkable degree of collegiality does not mask a lack of commitment to the Commission. In addition, with its success in virtually eliminating high seas fishing for anadromous stocks in the North Pacific, many of the Commission's objectives, along with several initially-important Terms of Reference for its Committees, have either declined in importance or become wholly redundant. The NPAFC appears to be at a cross road. The Review Panel believes this may be an opportune time for the Commission to establish a working group to consider the future of the Commission with a view to clearly articulating its objectives and goals for the future.

In terms of the activities of its Committees, the Committee on Scientific Research and Statistics (CSRS) conducts its business well and delivers a very high level of science. It promotes strong collaborations among the Parties and in particular among the individual participants of CSRS activities. The work is done largely in a collegial and consensus manner and there is a clear focus on important scientific issues relating to anadromous fish stocks in the North Pacific. The Review Panel found that the CSRS generally meets or exceeds most of

its Terms of Reference. This Committee has developed a broad focus on the leading scientific questions relating to anadromous stocks in the Convention Area which has extended to discussions of related scientific issues of anadromous stocks in national waters. However, the overall impression is that the Committee does not seem to be well-integrated into the daily functioning of the Commission. For example, only recently has scientific advice been provided to the Committee on Enforcement to help with their allocation of patrol assets, and syntheses of anadromous stock status in the North Pacific have been developed only twice, both times in response to requests from an external organisation. The Review Panel recommends that the CSRS conduct a “visioning” exercise to discuss and plan for its future roles, from which would come a clear statement of the vision and goals for the Committee.

The Committee on Enforcement (ENFO) also conducts its business efficiently, effectively and in a collegial manner. It has developed mechanisms for operational cooperation amongst the Parties which ensure effective high seas enforcement activities that would be the envy of any RFMO. The Review Panel found that ENFO generally meets its Terms of Reference as they are interpreted and applied as relevant to current enforcement needs in the Convention Area. However, with the general success of the Convention in ending high seas salmon fishing by the Parties and the apparent decline in illegal trafficking of salmon, several potential enforcement actions and mechanisms that were foreseen when the Convention was adopted, such as the development of a Certificate of Origin Program, have fallen from the agenda or not been pursued. Attention has focused instead on at-sea enforcement. In this respect ENFO appears to have moved beyond its Terms of Reference, which do not appear to provide the jurisdictional basis for the extensive inter-agency cooperation that has become the main focus of this Committee. Moreover, ENFO does not appear to have ever made any substantive recommendations to the Commission. Rather, it merely provides a forum for discussion, cooperation and building trust and confidence between the national enforcement agencies (which it does well). The Review Panel recommends that ENFO conduct a review of its mandate to assess the value of its extensive operational involvement and to clearly articulate its needs and roles in enforcing the Convention.

The NPAFC is well managed although there are financial tensions which run the risk of sidetracking numerous opportunities for improving both the delivery and knowledge of its work. The Review Panel believes the Parties should consider prioritizing expenditures to focus on core Commission activities, rather than curtailing these core activities. The F&A should establish publications and database sub-committees to explore the modern publishing and database management opportunities available to it and ensure that the Secretariat is appropriately funded and staffed to make full use of these opportunities.

Introduction

1 The Review Panel

At the 15th Annual Meeting of the NPAFC it was agreed that a performance review should be conducted to assess the NPAFC's performance as it relates to the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean (the Convention), the United Nations Convention on the Law of the Sea (LOSC) relating to the anadromous stocks (Article 66) and other relevant international instruments.

At the 16th Annual Meeting it was agreed that the Performance Review Panel would be composed of the chairpersons of the NPAFC three committees, the Committee on Scientific Research and Statistics (CSRS), the Committee on Enforcement (ENFO) and the Committee on Finance and Administration (F&A), plus one person from each Contracting Party not holding any committee chair, as well as two independent, external, internationally recognised experts with scientific and legal expertise in fisheries. The members of the Review Panel were duly appointed. However, due to budgetary constraints it was decided to postpone the review process until 2010.

The Review Panel convened during the 17th Annual Meeting of the NPAFC held in Niigata, Japan, from 2-6 November 2009. As originally constituted the Review Panel was to include Mr Robert Martinolich (Canada) in his capacity as ENFO Chair. Due to personal circumstances, Mr Martinolich was unable to participate and he was replaced both as ENFO Chair and as a Review Panel member by Mr Paul Steele (Canada). Accordingly, the Review Panel was composed of the following persons:

Internal Review Panel Members:

- Paul Steele (Canada) (ENFO Chair)
- Yukimasa Ishida (Japan) (CSRS Chair)
- Ki Baik Seong (Korea)
- Sergei Maksimov (Russia) (F&A Chair)
- Loh-Lee Low (USA)

External Review Panel Members:

- Rosemary Rayfuse, Faculty of Law, University of New South Wales, Sydney, Australia
- Ian Perry, Pacific Biological Station, Fisheries and Oceans Canada, Nanaimo, BC, Canada

Professor Rayfuse served as Chairperson of the Review Panel and Dr Perry served as Rapporteur.

The Secretariat was not part of the Review Panel but provided support to its activities, providing access to information and facilities that the Review Panel required to conduct its work.

During the final stages of the preparation of this report, Russia advised the Secretariat that Dr Maksimov had been replaced as a Review Panel member by Dr Vladimir Belyaev, who had been elected Vice-president of the Commission at the 17th Annual Meeting. This information was transmitted to the States Parties and to the Review Panel on 5 August 2010.

2 Terms of Reference for the NPAFC Review

It was decided by the NPAFC that the review should assess the performance of the NPAFC from 1993 (the period of the implementation of the NPAFC Convention) against the objectives set out in the Convention.

It was agreed that the review should be conducted based on the functioning structure of the Commission – the Committee on Scientific Research and Statistics (CSRS), the Committee on Enforcement (ENFO) and the Committee on Finance and Administration (F&A) to:

- promote the acquisition, analysis and dissemination of scientific information pertaining to anadromous stocks and ecologically related species in the North Pacific Ocean;
- coordinate efforts to conserve anadromous stocks in the North Pacific Ocean in order to prevent unauthorised fishing activities and trafficking in illegally harvested anadromous fish; and
- establish an effective mechanism of international cooperation to promote the conservation of anadromous stocks in the North Pacific Ocean.

It was agreed that the performance criteria would be based on:

1. specific and relevant articles, annexes, and amendments of the Convention; and
2. compliance with other relevant regional and global principles of resource conservation and management.

It was further agreed that the review should point to achievements as well as to areas for improvement.

Detailed criteria for the review were suggested by the chairs of the three Committees, in consultation with their members. The criteria that were adopted by the Commission are set out in Appendix 1 to this Report.

3 Approach and Structure of the Report

Following appointment, the Review Panel was provided with the Performance Review Criteria adopted by the NPAFC. The Review Panel met once during the 17th Annual Meeting to discuss its working procedures and establish a timetable for completion of its work. Review Panel members also took the opportunity to interview members of the national delegations. The Chair of the Review Panel subsequently visited the Secretariat in Vancouver to obtain documents, interview Secretariat staff, and discuss issues of relevance to the review. Due to budgetary and logistical constraints, however, the rest of the Review Panel's work was conducted electronically.

To gain an insight into the concerns and suggestions member states might have regarding the NPAFC's performance the Review Panel developed a questionnaire, based on the Review Criteria, for circulation to the member states. Only one response was received. This was analysed by the Review Panel and its comments and ideas have informed the reflections and recommendations contained in this report.

In conducting this review, and consistent with the desires of the States Parties expressed during the 17th Annual Meeting of the Commission, the Review Panel took a broad approach to the conduct of the review, considering a wide range of sources relating to the performance of regional fisheries management organisations in general, to the work of the Commission in particular, and to the international legal framework in which the Commission operates. This report is, however, structured in accordance with the Review Criteria and is intended to provide not only a review of past performance but also constructive advice on possible future improvements.

This report is structured into five chapters. Chapter 1 provides the general context. Chapters 2 to 4 cover the three criteria areas defined by the Commission to be reviewed by the Review Panel. Chapter 5 contains the Review Panel's conclusions and a summary of its recommendations.

Chapter 1

The NPAFC in Context

1.0 Introduction

In order to understand and assess the achievements of the NPAFC it is necessary to understand the unique context in which it operates. This context results from a combination of the nature of anadromous fish, the international legal regime relating to them, and the NPAFC's own constitutive documents. While it is clear that the scientific and enforcement activities of the NPAFC contribute to the conservation of anadromous stocks in the North Pacific, including the management of anadromous stocks in waters under national jurisdiction, given the total prohibition on fishing for anadromous stocks in the Convention Area, the NPAFC does not, in fact, develop stock-specific management measures for anadromous species in the North Pacific. Thus, although generally referred to as a Regional Fisheries Management Organisation (RFMO), the NPAFC cannot be fully assessed against all criteria generally ascribed to RFMOs. Nevertheless, the NPAFC does operate within the broad framework of the international regime relating to the conservation and management of living marine resources. It is therefore necessary to consider its activities within in that broader framework as well.

1.1 The Unique Nature of Anadromous Fish

Anadromous fish are species that migrate from the sea to freshwater to spawn. At sea they intermingle with anadromous stocks that spawn in other states of origin and with other pelagic species. This has important ecosystem management implications in terms of density-dependent processes and conservation of stocks. Anadromy, when coupled with rules on allocation of state jurisdiction, gives rise to a number of unique management problems. For example, returns to freshwater spawning grounds must be kept high to ensure stock viability, but at-sea exploitation of intermingled stocks can have deleterious effects not identified until the return run fails. Stock management is thus seriously compromised by unregulated at-sea exploitation. Additionally, fish originating from one state may be caught by fishermen in another giving rise to potential conflict over access and enjoyment of economic benefits from the fishery. Particularly where the natal state has invested in maintaining stocks and spawning habitat, investment will be lost and claims for compensation and more conflict may follow. The managerial challenges posed by anadromous fish have heavily influenced development of the international legal regime applicable to anadromous fish.

1.2 The International Legal Framework

A number of international legal instruments are relevant to the context in which the NPAFC operates and were reflected upon during the review process. These include legally binding treaties as well as non-legally binding resolutions and other international instruments.

1.2.1 *Law of the Sea Convention Article 66*

Of critical importance and relevance to the context of the NPAFC is Article 66 of the 1982 Law of the Sea Convention (LOSC). During the negotiation of the LOSC in the 1970s and

1980s it was recognised that the regime of the exclusive economic zone (EEZ), while helpful, would not be sufficient to ensure rational management of salmon resources. Accordingly, anadromous fish were provided a privileged place in the law of the sea.

Article 66 of the LOSC provides as follows:

1. States in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks.
2. 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 exclusive economic zone and for fishing provided for in paragraph 3(b). The State of origin may, after consultations with the other States referred to in paragraphs 3 and 4 fishing these stocks, establish total allowable catches for stocks originating in its rivers.
3. (a) Fisheries for anadromous stocks shall be conducted only in waters landward of the outer limits of exclusive economic zones, except in cases where this provision would result in economic dislocation for a State other than the State of origin. With respect to fishing beyond the outer limits of the exclusive economic zone, States concerned shall maintain consultations with a view to achieving agreement on terms and conditions of such fishing giving due regard to the conservation requirements and needs of the State of origin in respect of these stocks.
(b) The State of origin shall cooperate in minimizing economic dislocation in such other States fishing these stocks, taking into account the normal catch and the mode of operations of such States, and all the areas in which such fishing has occurred.
(c) States referred to in subparagraph (b), participating by agreement with the State of origin in measures to renew anadromous stocks, particularly by expenditures for that purpose, shall be given special consideration by the State of origin in the harvesting of stocks originating in its rivers.
(d) Enforcement of regulations regarding anadromous stocks beyond the exclusive economic zone shall be by agreement between the State of origin and the other States concerned.
4. In cases where anadromous stocks migrate into or through the waters landward of the outer limits of the exclusive economic zone of a State other than the State of origin, such State shall cooperate with the State of origin with regard to the conservation and management of such stocks.
5. 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 organisations.

In short, Article 66 recognizes the primary interest in, and responsibility of, the state of origin in whose rivers anadromous stocks spawn and provides that fishing for anadromous species shall only be conducted within the EEZ of states. Thus, fishing for salmon on the high seas, in areas beyond national jurisdiction, is prohibited by the LOSC and fishing states and states of origin are to cooperate, through regional organisations where appropriate, to ensure implementation of these obligations.

1.2.2 High Seas Driftnet Moratorium

The prohibition on high seas fishing for anadromous species is further reinforced by the moratorium on high seas large-scale pelagic driftnetting (HSDN Moratorium) which was adopted by the United Nations General Assembly in UNGA Resolution 44/225 of 22 December 1989 and which came into effect on 31 December 1992 in accordance with UNGA Resolution 46/215 of 20 December 1991. Pursuant to the Moratorium all members of the international community were to ensure, by 31 December 1992, the complete cessation of large-scale HSDN activities. They were further encouraged to take measures, both

individually and collectively, to prevent all HSDN activities. The General Assembly annually reiterates its calls for compliance with the Moratorium.

1.2.3 The FAO Compliance Agreement

Also relevant to the control of fishing for anadromous species on the high seas is the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (the Compliance Agreement) which was adopted by the FAO in 1993. The Agreement seeks to deter flagging or reflagging of vessels fishing on the high seas as a means of avoiding compliance with international conservation and management measures. Parties are required to ensure that their vessels do not engage in activities that undermine the effectiveness of such measures and that their vessels do not fish on the high seas unless appropriately authorised to do so.

1.2.4 The United Nations Fish Stocks Agreement

Given the LOSC Article 66 prohibition on fishing for anadromous stocks on the high seas the 1995 United Nations Fish Stocks Agreement (FSA) is not directly applicable to an assessment of the performance of the NPAFC. Nevertheless, the FSA does articulate modern principles for high seas fisheries governance including the ecosystem and precautionary approaches to management, the responsibilities of flag and other states, and modern approaches to enforcement. It thus provides additional useful context for the assessment of the performance of the NPAFC.

1.2.5 The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

The IPOA-IUU was adopted in 2001 under the auspices of the FAO. The IPOA-IUU applies to all States and entities and to all fishers. It sets out a comprehensive range of measures for unilateral, regional and global action including through appropriate RFMOs. In particular, these measures focus on all state responsibilities, flag state responsibilities, coastal state measures, port state measures, internationally agreed market-related measures, research and regional fisheries management organisations. The IPOA-IUU is a voluntary agreement. However, it provides guidance on what might be considered ‘best practice’ in enforcement and other activities relating to the prevention and deterrence of IUU fishing.

1.3 A Brief History of the NPAFC

The North Pacific Anadromous Fish Commission (NPAFC) is the successor organisation to the International North Pacific Fishery Commission (INPFC). The INPFC was established in 1953 to ensure maintenance of the fishery resources of the North Pacific, in particular salmon resources, at the level of maximum sustained productivity. Pacific salmon are harvested commercially in coastal waters by Canada, Japan, North and South Korea, Russia and the United States. At the time, Japan was also harvesting salmon and other species on the high seas in the western North Pacific and Central Bering Sea. Within the INPFC, restrictions on the Japanese high seas fisheries were posited as a line of longitude beyond which Japan was to ‘abstain’ from fishing.

Extensions by Canada and the United States of 200 nautical mile fishery zones in the 1970s resulted in renegotiation of the INPFC Convention. In 1986 further agreement was reached on the phase out of Japanese salmon fishing in the Central Bering Sea. In 1985 the Japan-USSR Agreement Concerning Cooperation in the Field of Fisheries gave the USSR the right

to regulate the taking of salmon originating in its rivers whether they were caught in the EEZ or on the high seas. In 1988 the USSR advised the Japanese that all fishing on salmon originating in their rivers outside their EEZ would cease by 1992.

Ongoing concerns that directed and incidental high seas interceptions of salmon in the high seas squid driftnet fisheries were seriously undermining both the catches and conservatory efforts of the origin states led to the negotiation and adoption of the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean at Moscow on 11 February 1992 by Canada, Japan, the Russian Federation and the United States of America. The Convention entered into force on 16 February 1993. The North Pacific Anadromous Fish Commission (NPAFC) was established in 1993 with its Secretariat headquartered in Vancouver, Canada. Upon establishment of the NPAFC the INPFC was formally dissolved.

1.4 The Convention

1.4.1 Convention Area

The Convention applies to the waters of the North Pacific Ocean and its adjacent seas beyond the 200-mile zones of the coastal States north of 33°N (Fig. 1). For scientific purposes, activities under the Convention may extend farther southward.

Figure 1
The Convention Area



1.4.2 Object and purposes of the Convention

The Convention is based on the recognition that anadromous stocks intermingle extensively during their migrations on the high seas of the North Pacific; that the States of origin have the primary interest in and responsibility for such stocks; that the fisheries for anadromous stocks should be conducted only in waters within the 200-mile zones and that the States of origin make expenditures and forego economic development opportunities to establish favourable

conditions to conserve and manage these stocks. The Convention also recognizes the importance of scientific research and establishment of an effective mechanism of international cooperation for the conservation of anadromous stocks in the North Pacific Ocean based on coordinating efforts.

The central objective of the Convention, articulated in Article III, is the conservation of anadromous stocks in the North Pacific Ocean through the prohibition of all directed fishing for anadromous stocks in the Convention area. Incidental catch is to be minimised to the maximum extent possible and retention of incidental catch is prohibited, although an exception is made for scientific research conducted in accordance with Article VII. This objective is to be achieved through the mechanisms established by the Convention, the purposes of which are to promote the acquisition, analysis and dissemination of scientific information pertaining to anadromous stocks and ecologically related species in the North Pacific Ocean, to coordinate efforts to conserve anadromous stocks in the North Pacific and to establish an effective mechanism of international cooperation to promote their conservation.

1.4.3 Species covered

The anadromous fish covered by the Convention are: chum salmon, coho salmon, pink salmon, sockeye salmon, Chinook salmon, cherry salmon, and steelhead trout.

1.4.4 Scientific approach

The Convention authorises fishing for anadromous fish in the Convention Area for scientific research purposes under national and joint research programs approved by the NPAFC. The taking of anadromous fish for scientific research purposes must be consistent with the needs of a scientific program and with the provisions of the Convention and should be reported to the Commission.

The Parties are to cooperate in the conduct of scientific research in the Convention Area which may include, as appropriate, research on other ecologically related species. The Parties are also to cooperate in collecting, reporting and exchanging biostatistical information, fisheries data, including catch and fishing effort statistics, biological samples and other relevant data pertinent to the purposes of the Convention.

Upon the Commission's request, the Parties are to provide to it catch, enhancement and other technical information and materials pertaining to areas adjacent to the Convention Area from which anadromous stocks migrate into the Convention Area. The Convention provides for the development of cooperative programs, including observer programs, to collect fishing information in the Convention Area for the purpose of scientific research. The Convention also provides for cooperation in scientific exchanges such as seminars, workshops, and exchanges of scientific personnel.

1.4.5 Measures to promote compliance

The Parties are to take appropriate actions individually or collectively in accordance with international law and their domestic laws to prevent unauthorised fishing activities and trafficking in illegally harvested anadromous fish. They are also required to take appropriate measures to prevent the transfer of registration of vessels registered under their respective laws and regulations for the purpose of avoiding compliance with the provisions of the Convention.

The Parties are to invite the attention of non-Parties to any matter relating to their fishing activity which could negatively affect the conservation of anadromous stocks within the Convention Area and to encourage such states to adopt laws and regulations consistent with the provisions of the Convention in regard to fishing operations conducted by their nationals, residents or vessels. The Parties are also to cooperate in taking action aimed at preventing directed fishing for, and the minimisation of incidental taking of anadromous fish in the Convention Area by nationals, residents or vessels of non-Party states.

1.4.6 Enforcement

All necessary measures shall be taken by each Party to ensure its nationals and fishing vessels flying its flag comply with the provisions of the Convention. Each party has the authority to board, inspect and detain fishing vessels of other Parties found operating in violation of the Convention. Article V of the Convention gives details of the enforcement mechanisms and provides that only the authorities of the Party to which the violating person or vessel belongs may try the offence and impose penalties. It is also stipulated that imposed penalties shall be commensurate with the seriousness of the infraction.

Further, the Parties are to cooperate in the exchange of information on any violation of the provisions of the Convention and on enforcement action taken, including the disposition of cases.

1.4.7 Accession and withdrawal

Other states may accede to the Convention at the invitation of the Original Parties (Canada, Japan, Russia, the United States) by unanimous agreement.

Any Party may withdraw from the Convention 12 months after the date on which it formally notifies the depositary (Russia) of its intention to withdraw.

1.5 The Commission

1.5.1 Objectives and responsibilities of the NPAFC

The objective of the NPAFC is to promote the conservation of anadromous stocks in the Convention Area. The Commission may also consider matters related to the conservation of ecologically related species in the Convention Area.

The responsibilities of the NPAFC are set out in Article IX of the Convention and include:

- recommend measures for conservation of anadromous stocks and ecologically related species in the Convention Area;
- promote exchange of information on activities contrary to the Convention, especially with respect to fishing for and trafficking in anadromous fish, as well as on responsive action taken by the Parties and, as appropriate, any non-Party State or entity;
- consider and make proposals for the enactment of schedules of equivalent penalties for activities contrary to the provisions of the Convention;
- consider possible means to relieve the damage which may be suffered by a State of origin as a result of fishing in violation of the Convention and, for that purpose, develop methods to identify the origin of fish which may be taken in violation of the Convention;

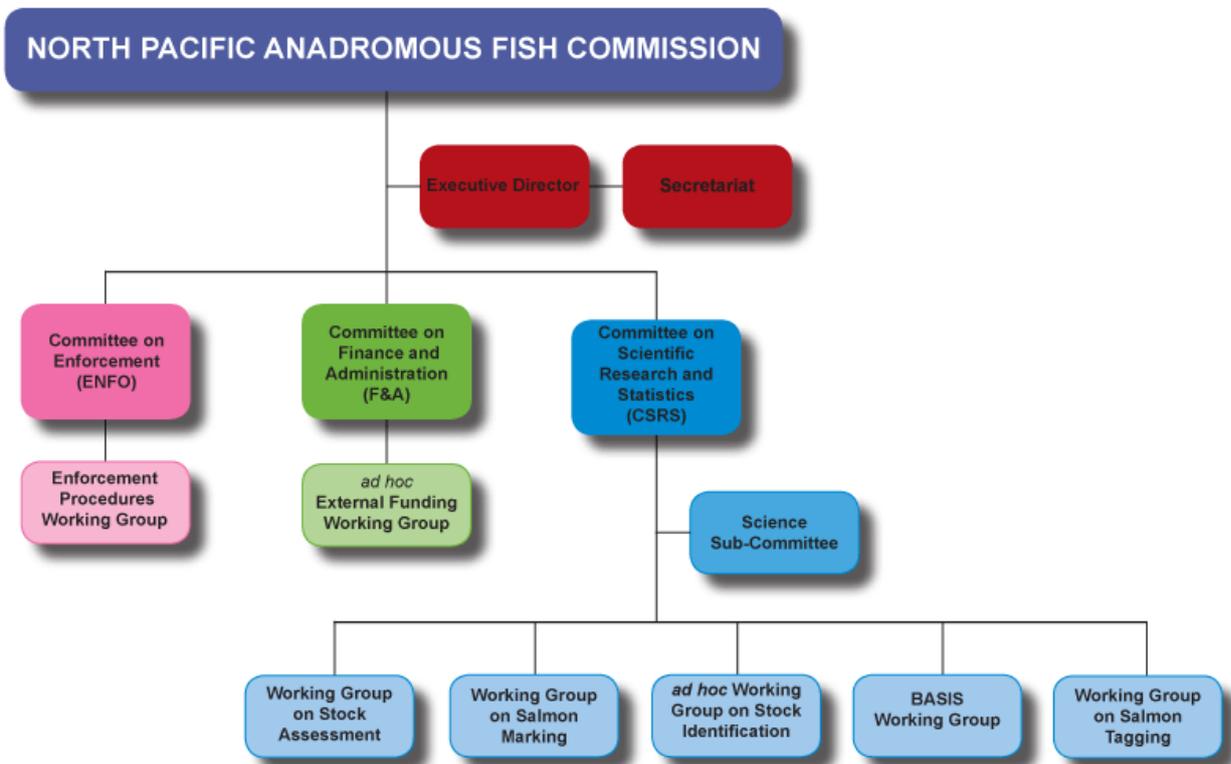
- review and evaluate enforcement actions taken and recommend additional action to be taken by the Parties to ensure effective and diligent enforcement of the provisions of the Convention;
- promote the exchange of catch and effort information in respect of activities of the Parties and, as appropriate, any States or entity not party to the Convention for conducting scientific research and for coordinating the collection, exchange and analysis of scientific data regarding anadromous stocks and ecologically related species, including data to identify the location of origin of anadromous stocks and provide a forum for cooperation among the Parties with respect to such anadromous stocks and ecologically related species;
- consider and make proposals to the Parties for enactment of a program for certificates of origin attesting that products of anadromous fish are from fish which were lawfully harvested;
- make recommendations to any Party with respect to scientific research activities within the Convention Area related to anadromous stocks and as, appropriate, ecologically related species;
- cooperate, as appropriate with relevant international organisations, *inter alia*, to obtain the best available information, including scientific advice, to further the attainment of the objectives of the Convention;
- where appropriate, invite any State or entity not party to the Convention to consult with the Commission with respect to matters relating to the conservation of anadromous stocks and ecologically related species in the Convention Area;
- recommend measures to avoid or reduce incidental taking of anadromous fish in the Convention Area;
- recommend to the Parties any measures needed to further the attainments of the objectives of the Convention;
- recommend amendments to the Convention and its Annex.

1.5.2 Structure of the NPAFC

Each Party is a member of the NPAFC and may appoint up to three representatives who may be accompanied at Commission meetings by experts and advisors. Each Party has one vote with general decisions being taken by simple majority of the Parties voting. Important matters, which are matters deemed important by any Party which is a state of origin of anadromous stocks that migrate into the Convention Area shall, however, be taken by consensus among the Parties that are states of origin. The official languages of the NPAFC are English, Japanese and Russian.

The NPAFC elects a President and a Vice-President for two-year terms, who are not to be representatives of the same Party. In addition, the NPAFC has established three subordinate committees: Scientific Research and Statistics (CSRS), Enforcement (ENFO), and Finance and Administration (F&A) as well as the Science Sub-Committee (SSC) and several Working Groups. The current organisational structure of the Commission is illustrated in Figure 2.

Figure 2
The Commission Structure



The NPAFC meets annually with its Committees and working groups meeting intersessionally as well.

The NPAFC is served by a Secretariat, located in Vancouver, Canada. Secretariat staff consists of the Executive Director who is appointed by the Commission, a Deputy Director, an Administrative Officer and a Secretary. The role of the Secretariat is to provide administrative services to the Commission, to compile and disseminate statistics and reports concerning anadromous stocks relevant to the Convention and ecologically related species, and to perform such other functions as follow from the provisions of the Convention or as determined by the Commission.

1.5.3 NPAFC membership

The Original Parties to the Convention are Canada, Japan, the Russian Federation and the United States of America. Other states may accede to the Convention with the unanimous agreement of the Original Parties.

On 27 May 2003 the Republic of Korea deposited its instrument of accession to the Convention and became the fifth member of the NPAFC.

Invitations have been extended to the People's Republic of China (PRC) annually. However, it has not yet indicated any interest in joining the NPAFC.

Chapter 2

Conservation of Anadromous Stocks According to the Provisions of the Convention – The Committee on Scientific Research and Statistics

2.0 Introduction

The objective of the Convention is to promote the conservation of anadromous stocks in the North Pacific Ocean within the Convention Area. Recognising that anadromous species spawn and rear in part in waters under national jurisdiction (national waters), however, and that what happens to these stocks in these national waters affects their conservation within the Convention Area, there are obvious interests in discussing and understanding the growth and mortality of anadromous stocks in these national waters.

Scientific issues relating to conservation of anadromous stocks under the Convention rest with the Committee on Scientific Research and Statistics (CSRS), established under the Article VIII(8) of the Convention and Rule of Procedure 11. The CSRS is charged with investigating, reporting and making recommendations on matters of scientific research, statistics and any other matters referred to it by the Commission. The membership of the CSRS consists of one Representative, and experts and advisors, from each Party.

2.1 Coordination of Scientific Research Programs

2.1.1 Cooperation in conduct of scientific research in the Convention Area (Article VII(1))

Article VII(1) of the Convention requires the Parties to “cooperate in the conduct of scientific research in the North Pacific Ocean and its adjacent seas beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, for the purpose of the conservation of anadromous stocks, including, as appropriate, scientific research on other ecologically related species”. To that end, national research plans for anadromous salmonids are presented and reviewed at annual CSRS meetings. In addition, since its inception, the Commission has actively developed coordinated science plans among its Members.

1993 – 2000

During these early years, the Commission identified issues and discussed coordination with the developing North Pacific Marine Science Organisation (PICES). The goal for this first Science Plan was agreed to be the investigation of the effects of changes in productivity of the North Pacific Ocean on Pacific salmon, including i) factors affecting trends in ocean productivity and their effects on the carrying capacity (for salmonids); and ii) factors affecting changes in biological characteristics of salmon (such as growth, size, age-at-maturity, ocean distribution, survival, abundance). In 1997, the Research Planning and Coordinating Group (RPCG) reviewed the Party’s research plans and revised the Science Plan to focus on 1) salmonid life history; 2) salmonid population dynamics; and 3) salmonid habitats and ecosystems. In general, the Science Plan during this era was reviewed and updated every two years by the Science Sub-Committee of the CSRS. Results from national programs that were activated under this plan were presented at an NPAFC-sponsored scientific workshop and published in NPAFC reports including “Climate change and salmon

production” (NPAFC Technical Report 1, 1998), and at two NPAFC symposia: “Assessment and status of Pacific Rim salmonid stocks” (NPAFC Bulletin 1, 1998) and “Recent changes in ocean production of Pacific salmon” (NPAFC Bulletin 2, 2000).

2001 – 2005

Key findings and outcomes from this first Science Plan and these publications led to the hypothesis that “there is a strong relation between climate and climate change and subsequent changes in marine productivity and survival of anadromous stocks in the ocean” In 2005, NPAFC adopted a new 5 year Science Plan that focussed cooperative research on gaps in understanding of marine life history of salmonids with respect to marine ecosystem processes that affect abundance and biomass of anadromous stocks. This second 5 year plan also represented a more coordinated approach to scientific research activities on salmonids in the North Pacific, and an attempt to combine resources among Parties to address important issues that were difficult for a single Party to investigate on its own. This Plan had three topics: 1) Bering Sea salmon research; 2) juvenile salmon research; and 3) winter salmon research. Research activities under NPAFC coordination focussed on topic (1), with the development in 2001 of a new international program on the Bering-Aleutian Salmon International Survey (BASIS). This program had four key scientific questions: 1) What are the seasonal stock-specific migration patterns of salmon and their relation to the Bering Sea ecosystem; 2) What are the key biological, climatic, and oceanographic factors affecting long-term changes in Bering Sea food production and salmon growth rates; 3) What are the similarities (or differences) in production trends between salmon populations in the Bering Sea and common factors associated with their trends in survival; and 4) Is there an overall limit or carrying capacity of the Bering Sea ecosystem to produce salmon?

2006 – 2010

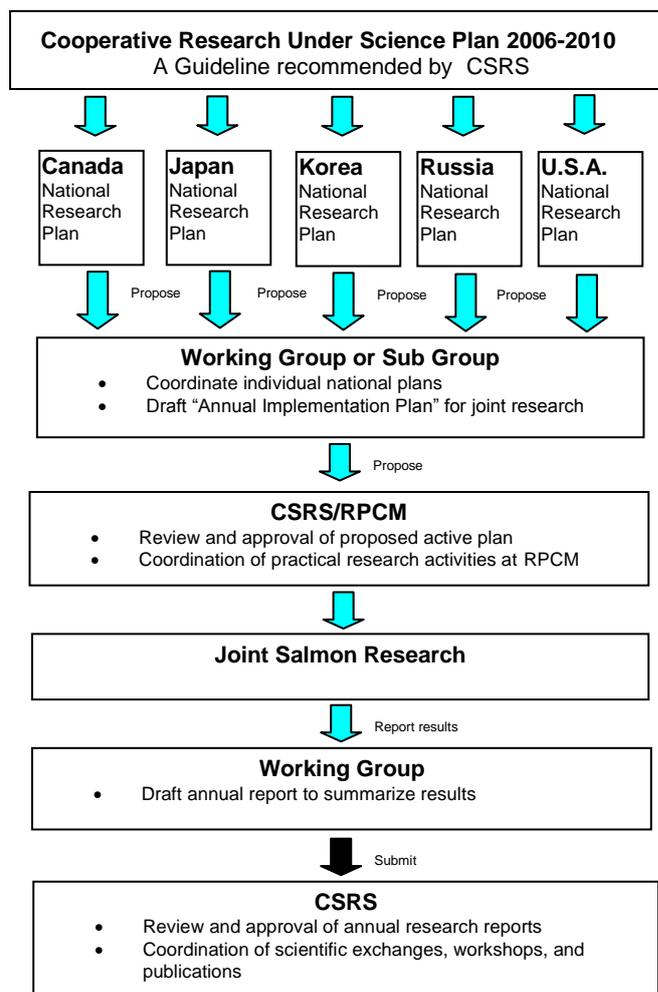
By 2005, the general goals of NPAFC-coordinated research programs had shifted to “further an ecosystem-based approach to conservation of North Pacific anadromous stocks and to contribute substantial new scientific information to marine ecosystem research, fishery management, and conservation activities of relevant organisations”. Two broad questions were posed: 1)(a) – What are the current status and trends in marine production of anadromous stocks; (b) – How are these trends related to population structure and diversity of anadromous stocks in marine ecosystems of the North Pacific; and 2) How will climate change affect anadromous stocks, ecologically-related species, and their North Pacific marine ecosystems? The focus for research during this period was continuation of the BASIS program, leading to a symposium in 2008 on “Climate change, production trends, and carrying capacity of Pacific salmon in the Bering Sea and adjacent waters”. Proposals for a follow-up program, BASIS-II, were developed and submitted for approval. The key research questions were revised as: 1) How will climate change and climate cycles affect anadromous stocks, ecologically related species, and the Bering Sea ecosystems; 2) What are the key climatic factors affecting cyclical changes in Bering Sea food production and pelagic fish communities; 3) How will climate change and climate cycles impact the available salmon habitat in the Bering Sea; and 4) How will climate change and climate cycles affect Pacific salmon carrying capacity within the Bering Sea?

2011 – 2015

Plans are in place to develop the next 5 year NPAFC coordinated scientific research plan. Parties will submit a summary of national plans for proposed research for 2011-2015. The Science Sub-Committee of CSRS will prepare an integrated draft plan for discussion at the Research Planning and Coordinating Meeting (RPCM) in 2010. From these discussions, the

plan will be submitted to the Commission for approval at its 2010 Annual Meeting. BASIS-II is expected to be a major activity of the Commission. Implementation of cooperative research plans approved by the CSRS and the Commission will follow the same procedures that were approved by CSRS for the BASIS research program (Figure 3).

Figure 3
Flow of planning activities from 5 yr NPAFC Research Plan to approval by the Committee on Scientific Research and Statistics, as developed for the BASIS program



Specific policies for cooperation, identifying and addressing user needs, data quality, management and dissemination, logistics, outreach and education, and public involvement will be developed at the working-group or sub-group level, and are subject to approval by the CSRS and the Commission.

In addition to these 5 year science plans, a “Long-term research and monitoring plan (LRMP) for Pacific salmon in the North Pacific Ocean” has been developed. It represents a consensus among a large group of researchers of the elements needed to improve the ability of each

country to forecast how their salmon populations are likely to respond to changing freshwater and marine ecosystems in the region. The Science Sub-Committee of the CSRS has been requested to determine the details of what will be needed to meet this goal.

Review Panel comments

- *There has been a movement away from concentration on the Convention Area to include salmon in national waters. This is reasonable as it recognises that events and processes that occur in waters under national jurisdiction also impact salmon in the Convention Area. There is a general trend of changing Scientific Plans based on information learned from previous Plans and from emerging issues in the scientific literature, e.g. carrying capacity in 1990s; climate change and ecosystem approaches in 2000's. The Review Panel commends the cautious approach of the CSRS to not take on too much at once, e.g. the emphasis over the past ~10 yrs on the Bering Sea and BASIS. It is expected that as the BASIS program concludes, other questions such as winter salmon issues are likely to become more immediate topics of research.*
- *The Science Sub-Committee of CSRS appears largely to concentrate on these larger-scale planning and coordinating activities. The Commission organisational chart (Figure 2) suggests, however, that the Science Sub-Committee has a role in overseeing and coordinating the activities of the CSRS Working Groups as a coherent set of activities, rather than what appears to be separate activities. The activities of these Working Groups are not highlighted (and integrated) in the 5 year plans.*
- *It is not clear, in particular for the early years, how much coordination of national research activities these NPAFC plans actually induced. The plans appear to have acted more as a framework within which national plans could be developed. This is in contrast to the later, stronger, coordination produced by the BASIS program.*

The Review Panel recommends that:

- *activities of CSRS Working Groups be included and integrated into 5-yr (and longer-term) research plans of the Commission.*

2.1.2 Develop appropriate cooperative programs to collect fishing information in the Convention Area for the purpose of scientific research on anadromous stocks and, as appropriate, ecologically-related species. (Article VII(4); ToR I-4).

Article VII(4) requires the development of “appropriate cooperation programs, including scientific observer programs”. It also requires collection of information, as appropriate, on ecologically related species. Discussion on observer programs was an agenda item at the meetings of the CSRS from 1993 to 1997, but was consistently tabled as “not considered” or “no recommendations were made”.

A review of salmon catch statistics and outputs from hatchery programs is a regular agenda item at every CSRS meeting. Parties provide data to the CSRS Working Group on Stock Assessment, which ultimately are published in the NPAFC Statistical Yearbook. Data pertain to catches in national waters, since there is no legal fishing for salmonids in the Convention Area. The Statistical Yearbook is available in printed form annually for 1993 to 1998, and for 3 year periods from 1999 to current, although data are available annually from the NPAFC web site. Since 2007, data reported in the Statistical Yearbook for each country include commercial salmon catch (as numbers of fish and in weight) by species and area; average weights of salmon in commercial catches by species and area; subsistence catch of salmon by species and area; sport catch of salmon by species; and releases of salmon fry and smolts by

species and area. Data for catches of ecologically-related species are not reported by all Parties. Catches of non-salmonids in the Convention Area by Taiwan were also included from 1993 to 2004. Data have been regularly requested by NPAFC from the People's Republic of China and North Korea. Data from China up to 2000 were received in 2002. No response has been obtained from North Korea.

The NPAFC Statistical Yearbook series is a continuation of the system developed under its predecessor Organisation, the INPFC. Over the years, changes have been made to the Yearbook as fisheries situations and data reporting requirements changed. The groundfish statistics table of the Yearbook is in need of changes. The main reasons for need of change are as follows: (1) changes in species importance in the groundfish category; (2) changes in statistical areas used by various organisations; (3) increasing importance of pelagic species catches; and (4) difficulty of data compilation by traditional INPFC statistical areas.

Discussions are ongoing regarding making the data in these Statistical Yearbooks available electronically (currently they are available on the NPAFC web site, but only in printed table format). In 2005, apparently the first overview document on catches and stock status of salmonids in the North Pacific was produced. This was updated in 2009.

Review Panel comments

- *Article VII(4) requires development of programs to collect fishing information in the Convention Area. However, this is now not applicable as there is no legal fishing for salmon in the Convention Area. Interpretation of this provision has been expanded by the CSRS to report all salmon catches and hatchery releases in national waters.*
- *Although data are presented on the Commission web site in the Statistical Yearbooks, these are not particularly useable, such as would be provided by true electronically-available data.*
- *Data on ecologically-related species are scattered and inconsistent, being provided by some countries and not by others. Lack of clear definition of which species are included by this term means that catch reporting for these 'ecologically related species' is also inconsistent among countries (when they are reported).*
- *Periodic overviews of catch data and stocks status, such as were done in 2005 and 2009, are extremely useful and should be done regularly and made more widely available.*
- *It seems that little action has been taken by the CSRS to develop scientific observer programs. The cessation of fishing for anadromous stocks in the Convention Area could be interpreted as making this Convention requirement obsolete. However, the obligation to establish scientific observer programs also relates to collection of fishing information on ecologically related species. There does not appear to have been discussion of establishing observers in other fisheries which may take salmon incidentally (see also Section 2.7.2).*

The Review Panel recommends that:

- *data in the Statistical Yearbook be made available in true electronic formats;*
- *reporting of non-anadromous species in the Statistical Yearbook be discontinued;*
- *the Commission examine whether an observer program for fisheries which take salmon incidentally is needed;*
- *periodic comprehensive overviews and reports of North Pacific salmonid stock status be continued.*

2.1.3 Review of proposed scientific research programs in accordance with Article VII(6) of the Convention (and ToR I-8).

Each annual meeting of the CSRS has an agenda item reviewing national research plans and proposed research vessel schedules. However, vessel schedules are often not available at the time of the CSRS meeting in the fall, therefore these plans and vessel scheduling issues are often discussed in greater detail in the Research Planning and Coordination Meetings (RPCM), which typically have taken place in the late winter or spring. Results from scientific research activities are reported to NPAFC and recorded in the CSRS Annual Reports or as formal NPAFC documents. Table 2.1 lists the NPAFC documents which present these national research plans and their results.

**Table 2.1
Summary of documents in which research and survey plans of NPAFC member Parties are presented. Numbers in cells represent NPAFC Document numbers.**

| | Canada | | Japan | | Korea | | Russia | | United States | |
|------|----------------|--------------|-------------------------------|---------------------------------|----------------|--------------|----------------|---------------------|-------------------------------|-----------------------|
| | Research Plans | Survey Plans | Research Plans | Survey Plans | Research Plans | Survey Plans | Research Plans | Survey Plans | Research Plans | Survey Plans |
| 1993 | | | | 18 | | | | 42 | | |
| 1994 | 95 | | | 79, 80, 81 | | | | 99 | | 99 |
| 1995 | 121, 180 | | 121, 180 | 79R1, 144 | | | 121, 180 | 99, 180 | 121, 180 | 119 |
| 1996 | 247 | | 240 | 216R1 | | | 240 | 247 | 240 | 247 |
| 1997 | 300 | | 300 | 273 | | | 300 | | 300 | |
| 1998 | 309A2, 387 | 309 | 309A2, 339 | 273R1, 332 | | | 309A2, 387 | 309 | 309A2, 387 | 304, 305, 309 |
| 1999 | 401A2, 455 | | 401A2, 428 | 332R1, 429 | | | 401A2, 455 | 401R1 | 401A2, 455 | 401R1 |
| 2000 | | | 491, 514 | 429R1, 492 | | | | 399R1, 464 | 409, 514 | 391, 392, 462 |
| 2001 | 525A4 | 525 | 525A2, 550, 582 | 429R1, 520, 551 | | | 525A3 | 525A7 | 525A5, 527, 528, 582 | |
| 2002 | | | 588, 589R1, 590, 656 | 551R1, 589, 590, 625 | | | 592A2 | 592A3 | | 591, 656 |
| 2003 | | | 741 | 625R1, 664, 718 | | | 690A.3 | 690A.4, 692 | 741 | 661, 679, 690A5 |
| 2004 | | 761 | 835 | 718R2, 749, 788R1, 841 | 820 | 761 | | 754, 761, 848 | 835 | 747, 751 |
| 2005 | | | 924 | 892 | 912 | | | | 924 | |
| 2006 | | | 1004 | 969 | 975 | | | | 1004 | |

| | | | | | | | | | | |
|------|------|------|---------------|----------------|-----------------------|------|--------------------------|------|------|------------------------|
| 2007 | | | 1004, 1073 | 969R1, 1020 | 975, 1054, 1073 | | 1019, 1028R1, 1073 | 1025 | 1073 | 1015, 1023, 1024 |
| 2008 | 1148 | 1092 | 1148 | 1084, 1085 | 1148 | 1054 | 1069 | 1095 | 1148 | 1093, 1094 |
| 2009 | | | 1212 | 1195 | 1178 | | 1069 | | 1212 | |

Review Panel comments

- *Article VII(6) of the Convention states that Parties shall submit scientific research programs to be conducted by nationals or vessels involving directed fishing for, or incidental takes of significant levels of, anadromous fish in the Convention Area in advance to allow appropriate scientific review by all Parties. The purpose of this Article is to avoid fishing activities being undertaken in the Convention Area under the guise of scientific research. While the Article refers specifically to scientific research activities within the Convention Area the practice has grown to include “all” national salmon marine research programs being presented and discussed. This has proven extremely valuable for the open exchange of scientific information and ideas.*
- *RPCM meetings often discuss research plans in more detail than during fall CSRS meetings. They also discuss several other items (e.g. symposia; external fund raising), including reports from the various Working Groups. It is not clear if these Working Groups all meet at these meetings (some RPCM reports note that discussions were by correspondence), but these meetings are not likely to have all Working Group members present. Generally, RPCM appear to be a mini- or interim-CSRS meeting, with possible duplication of effort. The possible implications of this duplication are discussed further in Section 2.4.2 and Chapter 4.*

2.2 Development of Anadromous Stock Identification

Coordination and assessment of scientific studies to ensure the identification of the location of origin of anadromous stocks migrating in the Convention Area and areas adjacent to it (Article IX(4), (6), and (7); ToR I-2).

The issue of identification of the stock origin of anadromous species caught at sea and, in particular, in the Convention Area, is important for both scientific questions and enforcement operations. For scientific purposes, this information is used for conservation of stocks, investigating migration routes and the potential impacts of climate change and other stressors on these routes, and to estimate the origin of salmon in complex mixtures Article IX(4) recognises that identifying the stock origins of anadromous species caught at sea illegally is central to determining the injured Party, and which Party is therefore entitled to reparations. It provides authority for the development of methods to identify the stock origin of fish taken in violation of the Convention in part to enable assessment of reparations to the injured state of origin Party. Article IX(6) specifies the need to promote the exchange of catch and effort information in respect of scientific research conducted by Parties and non-Parties, “including data to identify the location of origin of anadromous stocks and provide a forum for cooperation among the Parties. Article IX(7) suggests the Commission consider and make proposals to the Parties for the enactment of a program of certificates of origin attesting that products of anadromous fish are from fish which were lawfully harvested.

The issue of identifying stock origins predates the NPAFC Convention, and was conducted by the INPFC largely using scale pattern analysis, artificial tags and parasite infections. Within the NPAFC, a Working Group on Stock Identification and Growth was formed in 1995 to report on the use of tags, scale pattern analyses, otolith microstructure, parasite infections, and genetics for identification of anadromous stocks in the North Pacific. Its report provides a history and bibliography of studies that have used each technique. This group was dissolved in 1997, but was followed by four working groups on topics related to the identification and biology of anadromous stocks at sea. These are the *ad hoc* Working Group on Archival Tags (1998-1999), the Working Group on Salmon Marking (1998-current), the *ad hoc* Working Group on Stock Identification (1999 – current), and the Working Group on Salmon Tagging (2007 – current).

Stock identification techniques discussed by Parties under the NPAFC Convention settled on two primary methods. These are the thermal marking of otoliths of hatchery fish, and the use of genetic techniques. The initial objectives for the Working Group on Salmon Marking were defined to examine and recommend resolution of issues relating to thermal marking of anadromous stocks. Initially, otolith marks were designed for local management within a particular country or region. For example, in Alaska they are used to provide in-season information on the contribution of hatchery fish to commercial fisheries and to evaluate straying rates of pink and chum salmon to rivers and streams in Southeast Alaska. Alaska marks 84% of its salmon hatchery production. In other areas of the United States otolith marking is used as a small scale research tool. Russia uses otolith markings to assess the abundance of returning fish and the efficacy of hatchery production.

In the mid-2000's, and in particular with the activation of the BASIS program, many more otolith samples began to be obtained from salmon on the high seas, and the potential duplication of marks became a larger issue. The principal purpose of the Working Group on Salmon Marking is to discuss plans for thermal otolith marking of hatchery populations to ensure that duplicate marks are not used in NPAFC member countries. Considerable work was done in the late 1990's with discussions in NPAFC regarding verification of thermally marked otolith patterns and ages. These helped to form a standard by which marked otoliths from all Parties would be comparable. A workshop on salmon otolith marking was held in 2001 to discuss these issues in greater detail (abstracts published as NPAFC Technical Report 3, 2001). Currently, Parties report annually their plans for thermal marking of otoliths, and overlaps are identified and resolved prior to the marks being applied.

Initially, the database of otolith marks was maintained as an Excel spreadsheet that was circulated among Working Group members. This was subsequently upgraded to a web accessible database which at that time was housed by the Alaska Department of Fish and Game. In 2004, NPAFC provided assistance to some Parties to upgrade their ability to mark and record otoliths, in particular associated with uploading digital photographs into this Otolith Mark database. The Working Group periodically reviews the use of otolith marks assigned to member countries. A 2006 review concluded that exchanging mark plans prior to the RPCM reduces the number of mark conflicts. Data on otolith markings by NPAFC member countries are stored in an Otolith Mark Directory housed at the Mark, Tag, and Age Laboratory of the Alaska Department of Fish and Game, Juneau, Alaska. NPAFC documents listing marked otolith plans and releases are presented in Table 2.2.

Table 2.2
NPAFC documents presenting otolith marking information for member nations

| | Canada | | Japan | | Korea | | Russia | | United States | |
|------|-------------------------|--------------------|-------------------------|--------------------|-------------------------|--------------------|-------------------------|--------------------|-------------------------|--------------------|
| | Marked otolith releases | Otolith mark plans |
| 1993 | | | | | | | | | | |
| 1994 | | | | | | | | | | |
| 1995 | | | | | | | | | | |
| 1996 | | | | | | | | | | |
| 1997 | | | | | | | | | | |
| 1998 | 358 | | | | | | 379 | | 368, 372, 374 | |
| 1999 | | | | | | | 400 | | 455 | |
| 2000 | | 509 | 461, 488 | | | | 507 | | | 463R1 |
| 2001 | | | 541 | 519R1 | | | | 575 | 566 | 576 |
| 2002 | | 652 | 613 | 587R1 | | | 650 | 651 | 637 | 638 |
| 2003 | | 711 | 719 | 665R1 | 734 | | | 689 | 704 | 703, 704 |
| 2004 | | 803 | 789 | 750 | 821* | | 746, 826 | 827 | 777 | 757R1 |
| 2005 | | 856 | 895 | 842 | | 882R1 | 919 | 846 | 870 | 847R1 |
| 2006 | | 947 | 968 | 938R1 | 974 | 974 | 997 | 998 | 970 | 936R1 |
| 2007 | | 1029 | 1059 | 1018R1 | 1056R1 | 1056R1 | | 1022 | | 1016R1 |
| 2008 | | | 1114 | 1087R1 | 1130 | 1130 | 1107 | 1108 | | 1083R1 |
| 2009 | | 1165 | 1205 | 1163R1 | 1177 | 1177 | 1189 | 1190 | 1196 | 1162R1 |

* coded wire tag releases

With respect to genetic techniques, recognising that genetic methods of identifying species and stocks were improving, the CSRS formed an “*ad hoc*” Working Group on Stock Identification in 1999. The goals of this Working Group are to: 1) develop, standardize, and disseminate genetic and other databases among the Parties; 2) encourage the development of new genetic technologies; and 3) facilitate the dissemination of statistical techniques. An important overall goal of this Working Group is to develop genetic baseline data for salmon stocks in the North Pacific. Projects in 2009 included chum in the Bering Sea (Russia, Japan), genetic stock identification of steelhead and other salmon (US), and the stock composition of salmon in bycatch from the US Bering Sea pollock fishery. Russia has relied primarily on scale pattern analyses to identify stocks, although in 2009 Russia began to develop microsatellite and mitochondrial DNA baselines for chum and pink salmon. Korea examines parasitic fauna as a biological tag for chum salmon returning to Namdae-cheon (stream); they also use genetic variations in mitochondrial DNA control region and microsatellite DNA analyses to study the relationships between chum salmon from Korea and other countries. A Japanese-US collaboration is underway to develop single nucleotide polymorphism (SNP) baselines for sockeye, chum and Chinook, and in the US for steelhead. A project between the US and Japan is developing an electronic database for SNP data which is intended to be accessible from the NPAFC web site. Parties have provided tissue samples to this project, and scientific work is on-going. The United States is also developing genetic stock identification algorithms that combine different types of genetic characteristics and non-genetic characteristics into one analysis. These data will assist in identifying the origins of stocks harvested in mixed-stock fisheries and in determining the oceanic distributions of stocks.

Discussions began in 2007 on development of a genetic baseline database that would be accessible to Convention Parties. Work remains in progress. Electrophoretic methods have been used to identify salmon genotypes and their region of origin from samples of chum salmon seized from factory trawlers.

The fourth Working Group, on Salmon Tagging, was formed to: 1) manage the high-seas tagging database including the current INPFC - NPAFC tagging data and the future tagging activities; 2) coordinate the high-seas tagging experiments; 3) collect the release and recovery information and distribute them among the Parties; 4) report the annual summary of the high-seas tagging activity to the CSRS; 5) format disc tags with the NPAFC logo for its future use; and 6) encourage reporting tag recoveries by the public. Information on high-seas coded-wire tagged (CWT) salmonids has been reported by several Parties annually to the INPFC (up to 1992) and to the NPAFC (since 1993), and includes all release and recovery data of high-seas tagging experiments conducted by INPFC/NPAFC Parties from 1956 onwards. This database was managed by the University of Washington until 2006, at which time the US Party requested a change of database manager. It was requested that the NPAFC Secretariat manage this database, however, the Secretariat pointed out that current resources were insufficient for this task. This Working Group was formed to discuss and evaluate this, and related, issues on salmon tagging.

Review Panel comments

- *Terms of Reference for the ad hoc Working Group on Stock Identification could be made clearer and more specific. For example Terms 1 and 3 are phrased in general terms and do not specifically indicate for anadromous species or for stock identification (although this is the obvious interpretation). The Review Panel noted that the focus on methods and the database is appropriate.*
- *The genetic techniques are up-to-date; the database is still in development; there is no mention of statistical techniques in the 2009 report of this Working Group. The 2008 report mentions a variety of non-genetic techniques are still in use (e.g. parasites in Korea; scale pattern analysis in Russia).*
- *Stock identification methods, including parasites, morphological features, and scale data, were used to assess the stock origins of sockeye and chum salmon seized from a Chinese fishing vessel in 1999.*
- *Reports from each of these Working Groups each year contain a lot of repetition in Working Group activities. The impression is mostly of information exchanges and coordination of samples and their exchanges; progress on exchanging techniques and building the genetic baseline database seems slower.*
- *There is a continuing problem to get Parties to contribute information to the Otolith Mark Database in a timely manner.*
- *The Working Group on Salmon Tagging meets at CSRS annual meetings. Parties exchange information on tagging activities and tag recoveries, and discuss tag return rewards and how to assign these. It is unclear how much management of the high-seas tagging database or coordination of high-seas tagging experiments is done by this Working Group. The Terms of Reference, and perhaps the existence, of the Working Group should be re-evaluated.*

The Review Panel recommends that:

- *the Commission re-visit and re-assess the Terms of Reference and the need for the current Working Groups. How do they fit in with the future vision for NPAFC-coordinated research?*

- *the Commission re-assess requirements, resources, and commitments to the multiple databases established by these Working Groups. Consideration should be given to direct support and housing by the Secretariat.*

2.3. Ecologically-Related Species

Availability of scientific information and views on ecologically-related species, including the impact of bycatches in related fisheries of species of concern designated by the Commission (Article IX(12), ToR I-3).

Article IX(12) provides authority for the Commission to recommend measures to avoid or reduce incidental taking of anadromous fish in the Convention Area. Ecologically-related species are also referred to in Article VII(4) in regards to the development of observer programs. The current Terms of Reference for the CSRS require the CSRS to “ensure the availability of scientific information and views on ecologically-related species, including the impact of by-catches in related fisheries of species of concern designated by the Commission”.

In the International North Pacific Fisheries Commission (INPFC, the predecessor of the NPAFC), there were three Sub-Committees: the Sub-Committee on Salmon, the Sub-Committee on Non-Anadromous Species, and the Sub-Committee on Marine Mammals. When the NPAFC was established, there was an intention that the research and data collection for the non-salmonid species should be kept within the NPAFC framework. However, this proved impractical because non-anadromous species such as groundfish are mainly distributed within the exclusive economic zones of each member country. In addition, the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea was established which assumed responsibility for this species in this international area. The first meeting of the CSRS (1993) included an interim Term of Reference for the committee to “identify ecologically-related species which may be designated by the Commission as being of concern”. Both the United States and Japan submitted suggestions for how the NPAFC should identify and designate ‘ecologically-related species’ for the purposes of scientific research and conservation actions under the Convention. The United States and Russia were of the view, which is worth quoting in full, that:

"It should be up to any National Party to submit information on species and fisheries that it deems to be ecologically related to salmonid stocks or of interest to the Commission for discussion by the Committee. Any National Party should also have the right to request, from another National Party, information that it deems to be ecologically related to salmonid stocks or of interest to the Commission for discussion by the Committee. Any National Party also has the prerogative not to submit the information as requested if it is unable to do so. These principles will promote the free exchange of scientific information and views pertaining to the conservation of anadromous stocks and ecologically related species as addressed by the Convention and Interim Terms of Reference for the Committee".

The CSRS took the view that ‘ecologically related species’ are adequately defined in the Convention as living marine species which are associated with anadromous stocks found in the Convention Area, including, but not restricted to, predators and prey of anadromous stocks. The Committee agreed that it would not be constructive to prepare a list of such ‘ecologically related species’ at this stage of the Commission's history because the list would likely be incomplete and, should a species not be on the list, would inhibit free exchange of

scientific information and progress of science on the productivity and conservation of anadromous stocks and the conservation of ecologically related species. The Committee also agreed that identification of species that have an impact on the production of Pacific salmon would require careful consideration of interspecific relationships and a clear understanding of their relevance to conservation of Pacific salmon stocks.

This issue remained as an agenda item for the CSRS until 1995, after which it disappeared from the agenda. Each time it was discussed, the Committee did not make any recommendations on this issue.

Review Panel comments

- *Attempts were made early on to define the term ‘ecologically related species’ for NPAFC operational purposes, but no consensus was reached and no recommendations were made. Current practice and understanding appears to be for each Party to define as they wish, and to include discussion of ecologically-related species in their own activities and report on these to NPAFC as they wish. Parts of this discussion in the early days also related to how NPAFC should interact with PICES, and to some extent it appears that NPAFC has left research on ecologically related species to PICES. The lack of designation of these species and therefore direct inclusion into NPAFC research activities appears not to have detracted from NPAFC work on salmon, as these other species have been included in national research programs – and they were considered directly in the BASIS program. However, the lack of designation by the Commission of ecologically-related species may make discussions of developing a broader ecosystem approach or context for anadromous species in the North Pacific more difficult. The Review Panel notes that RFMO’s (generally) have been recommended to develop such an ecosystem approach (see, eg, Lodge et al. 2007. Recommended Best Practices for Regional Fisheries Management Organisations. Chatham House, London).*

The Review Panel recommends that:

- *the Commission continue to define ‘ecologically related species’ in vague terms and as needed for specific research projects, but recognise this is contrary to a Convention Article;*
- *the Commission rely on PICES and other organisations for detailed information on ‘ecologically related species’, perhaps requesting specific information and syntheses as needed from these organisations.*

2.4. Scientific Exchanges

2.4.1 Review and coordination of the collection and exchange of scientific data and collection of specimens of anadromous species (Article VII(2) &(3), ToR I-1).

Article VII(2) refers to collecting, reporting, and exchanging biostatistical information, fisheries data, biological samples, and other relevant data with respect to fisheries and scientific research *in the Convention Area*. Article VII(3) refers to providing the Commission (upon its request) with similar information pertaining to areas *adjacent to the Convention Area from which anadromous stocks migrate into the Convention Area*, in other words, waters under national jurisdiction. ToR I-1 simply notes the review and coordination of the collection and exchange of scientific data and specimens of anadromous species.

This has been a core activity of CSRS. A review of salmon catches and enhancement activities has been an agenda item since 1993. The Secretariat prepares tables of preliminary catch and enhancement data for the most recent year based on information provided by the Parties, and the Parties provide additional information either at the meetings or as separate NPAFC documents. Catch and enhancement data are also considered annually by the Working Group on Stock Assessment. Exchanges of samples are also a regular agenda item, including acetate impressions of scales, tissue samples of scales and fin clips for genetic analyses, other tissue samples for genetic analyses, and physical and biological oceanographic data. These requests and exchanges are regularly tracked and reported at annual CSRS meetings. Some of these requests are for the same or similar types of data or samples over several years. In 2009, a 'Comments' column was added to the Sample and Data Requests Appendix to indicate if data and samples had been received. At least one report noted that meeting a request for data exchange would be easier if a project was conducted as a cooperative NPAFC project endorsed by CSRS. All requests for sample exchanges pertain to salmonid species; specific requests for data include physical oceanographic and zooplankton information.

In the early years there was concern that data exchanges and analyses would be complicated by different collection and analytical methods in use by the Parties. A Working Group on Methodology Standardisation (1995-1997) was formed to discuss and exchange information on measuring salmon biological characteristics and methods of zooplankton analysis, and methods of collecting salmon food habits and bioenergetics data including a standardized format for a common NPAFC food habits database. The Working Group report was published in 1997 as NPAFC Doc. 256 (Rev. 2), which outlined the methods used by the parties for fisheries and oceanographic research. The Working Group concluded that there was no need to standardise methods and that differences between methodologies were logical considering the differences between researchers and capabilities. The Working Group also recommended that data from research cruises continue to be made available to all Parties through publication in NPAFC documents.

The CSRS also recognised a need to test inter-laboratory variation in scale age and growth data. A sockeye salmon scale age determination experiment was arranged among experts at nine laboratories in Canada, Japan, Russia, and the United States. The results indicate that ocean age determinations are consistent among laboratories. However, there was substantial variation among the laboratories in freshwater age determinations. The results suggest that there may be need for international review and standardisation of methods and criteria used to interpret freshwater age and growth patterns on salmon scales.

Review Panel comments

- *Scientific exchanges are a very strong aspect of CSRS activities, supporting excellent science.*
- *Efforts to report on and compare at-sea and age determination methods in current use are worthwhile, although the logical next step does not appear to have been taken, i.e. to develop conversion factors where appropriate, as was recommended by the Working Group.*
- *The Review Panel notes that a group was formed to coordinate methods during the BASIS field programs.*
- *In terms of requests for exchanges of data and samples, it is important for CSRS to note when such requests have not been met, and for what reasons, in order to determine whether the Commission can assist with resolving possible conflicts or misunderstandings.*

The Review Panel recommends that:

- *the Commission consider a program to compare at-sea sampling methods and develop conversion factors or at least clarify their differences, in the context of being able to compare results among member States;*
- *the CSRS track the completion of requests for exchanges of data and samples among member Parties.*

2.4.2 Coordination of scientific information exchanges, seminars, workshops, field research, and data analyses (Article VII(5), ToR I-5).

Article VII(5) specifically requires the Parties to endeavour to cooperate in scientific exchanges such as seminars, workshops and, as appropriate, exchanges of scientific personnel necessary to achieve the objectives of the Convention. Cooperation takes place both within the formal Commission structures and beyond.

In the INPFC, an Ad Hoc Salmon Research Coordinating Meeting was held in spring just before the beginning of the salmon fishing season on the high seas. These meetings are the predecessor for the present Research Planning and Coordinating Meetings (RPCM). Within the NPAFC, Research Planning and Coordinating meetings (RPCM) have been held since 1995, typically in the spring, 6 months after the NPAFC Annual meeting. Since issues of fishing on the high seas are no longer relevant, the RPCM have focused on research activities. Participants are called the 'Research Planning and Coordinating Group' (RPCG) although this does not seem to be a formally established group recognised by the Commission, being simply those who were able to participate in the meeting. RPCM meetings are typically chaired by the chair of the CSRS. The agenda is similar to that for the annual CSRS meetings, although with perhaps more details in the planning and coordinating of field surveys. By the spring, most Parties have their vessel survey schedules confirmed with dates, and can discuss details of sampling and personnel exchanges. Working Groups established under CSRS also generally report their progress at the RPCM meetings, however, participation by members in the Working Groups is often sparse, with an intended focus on issues requiring planning and coordination, and often with reports being presented by alternative participants. Requests for exchanges of scientific personnel on these surveys are usually discussed at the RPCM meetings, because specific survey plans are then available.

Exchanges of scientific personnel on research surveys of other Parties have been frequent, although numbers are limited to often fewer than 10 people per year. This was handled in an *ad hoc* manner in the early years, but with the BASIS program in the early 2000's, such exchanges were found to be particularly important, and the process became more formal. The Commission made funding available to support travel of research personnel on several of these BASIS surveys. The Commission has also supported funding of a small number of researchers on high-seas surveys in the North Pacific. Funding has also been made available by the Commission to support exchanges of research personnel for training, for example of Koreans to Japan to learn otolith marking techniques and Russians to Japan to facilitate sample and data exchanges.

The Commission has been very active in sponsoring seminars and workshops on relevant topics, both on its own and in co-sponsorship with other organisations. Financial resources have been the usual limiting factor. These meetings are identified in Table 2.3.

Table 2.3. Symposia, seminars, workshops convened or co-sponsored by the Commission

| Year | Event |
|------|--|
| 1996 | Symposium on Assessment and Status of Pacific Rim Salmonid Stocks: Sapporo, Japan (October) |
| 1998 | Workshop on Climate Change and Salmon Production: Vancouver, Canada (March) |
| 1999 | Symposium on Recent Changes in Ocean Production of Pacific Salmon: Juneau, U.S.A. (November) |
| 2000 | Workshop on Factors Affecting Production of Juvenile Salmon: Comparative Studies on Juvenile Salmon Ecology between the East and West North Pacific Ocean: Tokyo, Japan (October) (NPAFC lead, PICES co-sponsorship); Beyond El Nino Symposium: San Diego, USA (March) – co-sponsorship with PICES |
| 2001 | Workshop on Salmonid Otolith Marking: Seattle, USA (March) |
| 2002 | Causes of Marine Mortality of Salmon in the North Pacific and North Atlantic Oceans and in the Baltic Sea: Vancouver, Canada (March) (NPAFC lead, included co-sponsorship by PICES, ICES, NASCO, IBSFC) |
| 2003 | Application of Stock Identification in Defining Marine Distribution and Migration of Salmon: Honolulu, U.S.A (November) |
| 2004 | BASIS-2004: Salmon and Marine Ecosystems in the Bering Sea and Adjacent Waters: Sapporo, Japan (October) |
| 2005 | The Status of Pacific Salmon and their Role in North Pacific Marine Ecosystems (Joint symposium with PICES): Jeju Island, Korea (October) |
| 2006 | 2 nd Juvenile salmon workshop: Sapporo, Japan (April) |
| 2007 | |
| 2008 | BASIS symposium: Seattle, USA (November); Long-term Monitoring and Research Project Workshop: Korea (April) |
| 2009 | |
| 2010 | Climate change effects on fish and fisheries (NPAFC co-sponsorship): Sendai, Japan (April); Salmon workshop on climate change: Sendai, Japan (April) |

Review Panel comments

- *The Commission is to be congratulated on its record of support for international workshops and symposia on topics of interest to the Commission, and for publishing the proceedings of these events. The Commission has upheld a very high scientific standard in these activities.*
- *The RPCM appear to be useful activities, for three reasons: they are conducted in the spring when vessel schedules are known and staffing details (such as room for foreign scientists) can be confirmed; they provide an interim opportunity for on-going work to be presented and discussed; and they are generally smaller and somewhat less formal, providing an opportunity for more detailed working discussions than usually occur at annual CSRS meetings. However, the RPCM appear to try to cover all the same topics as the annual CSRS meetings, including reports from Working Groups. While this provides an opportunity to be updated with on-going progress, it is rare for all (sometimes even any) members of Working Groups to be in attendance. It may be more useful to develop an agenda which focuses on fewer topics in greater detail. An alternative would be to conduct*

the specific business of coordinating vessel schedules and personnel participation by correspondence (i.e. by Email, perhaps coordinated by the Secretariat).

The Review Panel recommends that:

- *if Research Planning and Coordinating meetings continue, they focus on fewer topics in greater detail (selected topics may rotate among years).*

2.5 Cooperation with Relevant International Organisations

Cooperate, as appropriate, with relevant international organisations to obtain the best available information, including scientific advice, to further the attainment of the objectives of the Convention (Article IX(9), ToR II-1).

Cooperation with relevant international organisations has been a standing agenda item for the CSRS meetings since 1993. The list of invitees has consistently included:

- Asia-Pacific Fishery Commission (APFIC; formerly the Indo-Pacific Fishery Commission)
- Food and Agriculture Organisation of the United Nations (FAO)
- Inter-American Tropical Tuna Commission (IATTC)
- Intergovernmental Oceanographic Commission (IOC- UNESCO)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- International Council for the Exploration of the Sea (ICES)
- International Pacific Halibut Commission (IPHC)
- North Atlantic Salmon Conservation Organisation (NASCO)
- Northwest Atlantic Fisheries Organisation (NAFO)
- Pacific Salmon Commission (PSC)
- North Pacific Marine Science Organisation (PICES)

Most of these organisations have participated intermittently.

The most consistent and closest interactions have been with the North Pacific Marine Science Organisation (PICES). The purpose of PICES is to promote and coordinate marine scientific research to advance scientific knowledge of the North Pacific Ocean and adjacent waters. It was established in 1992 by Canada, China, Japan, and the United States with Russia and Korea having also joined the organisation. The geographic scope of the two organisations overlaps, although the geographic interests are larger for PICES. Many participants in PICES are also participants in the NPAFC, in particular in CSRS.

There was considerable debate in the early years of both organisations as to the scope of their interactions and their joint responsibilities for scientific studies in the North Pacific. The Commission formed an informal working group at the first meeting of the CSRS to discuss questions and problem areas regarding anadromous species that could be posed to PICES. PICES recommended that the Commission identify specific questions and general areas of cooperation wherein PICES and NPAFC scientists could work together to develop solutions to questions regarding anadromous species. The Parties agreed that NPAFC and PICES should jointly examine the critical issue of the impact of changes in the productivity of the North Pacific Ocean on Pacific salmon. Critical issues to be examined included an analysis of the factors affecting current trends in the productivity of the North Pacific Ocean and their impacts on salmonid carrying capacity, and the factors affecting changes in biological

characteristics of Pacific salmon. These characteristics include growth, size at maturity, age at maturity, oceanic distribution, survival, and abundance. These issues subsequently became major topics within the series of NPAFC 5-year Science Plans. PICES invited NPAFC participation to help develop the PICES 10-year integrating program on Climate Change and Carrying Capacity (CCCC) in the North Pacific. NPAFC expressed its wish to take the lead on issues relating to anadromous species in the North Pacific. Efforts were made to identify common elements in the science plans of the two organisations and to work on these collaboratively.

Representatives of both organisations have consistently participated in each other's formal meetings (e.g. PICES representatives have reported to CSRS meetings; NPAFC representatives have reported to PICES). The Commission has also participated in PICES CCCC planning meetings, workshops, symposia, and has supported relevant sessions at PICES annual meetings. NPAFC has also contributed, through its Stock Assessment Working Group, reports on the status of salmon populations around the North Pacific to PICES Ecosystem Status Reports, in 2000 (PICES. 2004. *Marine Ecosystems of the North Pacific*. PICES Special Publication No. 1. Sidney, BC) and in 2010 (McKinnell and Dagg. [Eds] *Marine Ecosystems of the North Pacific Ocean, 2003-2008*. PICES Special Publication 4, Sidney, BC). A chapter on salmonids was authored by NPAFC in the 2004 ecosystem status report, which included historical to current records on the catch, escapement and hatchery releases of Pacific salmon, by species, and by regions. In the 2010 report, NPAFC contributed a salmon status report document, information from which was included in the PICES report by an NPAFC participant at the PICES workshop.

NPAFC also made requests to PICES for assistance in obtaining data from PICES member states who are not members of NPAFC for inclusion in the NPAFC Statistical Yearbook, and adding further tables with data of mutual interest. Korea indicated in 1995 that it would provide its data through PICES. These requests ceased when Korea joined NPAFC.

The other international organisation with obvious close interests to NPAFC is the North Atlantic Salmon Conservation Organisation (NASCO). Interest in increasing collaborations with NASCO emerged in 1998 in the context of co-sponsoring symposia relating to issues of marine growth and survival of salmonids. In 2002 NPAFC and NASCO (and other organisations) jointly sponsored a symposium on the "Causes of Marine Mortality of Salmon in the North Pacific and North Atlantic Oceans and in the Baltic Sea" (see Table 2.3). Subsequently, NASCO representatives participated in NPAFC meetings. In 2005 NPAFC prepared a discussion document regarding enhancing the cooperation among these two organisations. Suggestions included future joint symposia, scientific research on issues of stock assessment methodologies (e.g. genetic stock identification), hatchery practices and their impacts on the wild stocks, the impacts of climate change, and management. In regards to the latter topic, the discussion document noted that NASCO is actively involved in the application of the ecosystem and precautionary approaches to issues such as management of fisheries, minimising impacts of aquaculture and introductions and transfers, and habitat protection and restoration. However, the document also noted that these management aspects may be less of a focus for NPAFC.

Review Panel comments

- *The Commission extends invitations to participate in its annual meetings to the logical organisations, although in general only a few accept and in sporadic years. The Commission appears to be building good relationships with NASCO, including*

participation of the Executive Secretary for NPAFC at NASCO meetings and, at times, vice versa. The strongest relationships have been with PICES, which is not surprising given the converging interests in geographic areas and scientific topics, and overlap of individuals involved in both organisations. The impetus of the PICES Ecosystem Status Reports for NPAFC to prepare syntheses of salmonid stock information for the North Pacific, and the NPAFC contributions to these reports, has been very valuable to both organisations. It is unclear why PICES has not had a stronger formal participation in the NPAFC BASIS program, even though the Review Panel notes that several of the researchers in BASIS are also involved in PICES. Scientists involved in PICES have provided oceanographic information for BASIS activities and analyses, and have used oceanographic data collected on BASIS surveys.

- *The Review Panel notes that representatives from the Pacific Salmon Commission do at times participate in CSRS meetings as observers, although more frequent, and more formal, interactions with the Pacific Salmon Commission might have been expected, considering their areas (both geographic and biologically) are complementary to those of the Commission.*

The Review Panel recommends that:

- *specific requests for information and syntheses, for example of ‘ecologically related species’, be directed to relevant organisations, such as PICES.*

2.6 Review of Scientific Research Results

2.6.1 Review and approval of reports submitted for publication and recommendations regarding other reports to be published (ToR I-11).

The definition of the term “publication” in the CSRS Terms of Reference is unclear. It can be interpreted broadly to include any form of publication, such as NPAFC documents when they are available (“published”) on the NPAFC web site and freely accessible for download. The term can be interpreted narrowly to include in hard-copy formats such as the NPAFC Technical Reports series or NPAFC Bulletins, or in the externally-reviewed primary scientific literature (scholarly journals, etc.). The Review Panel recommends the broader definition of the term.

The CSRS regularly reviews reports of scientific research activities conducted by the Parties and the statistics which are submitted to the annual meetings as NPAFC Documents. These reviews tend to be for information rather than rigorous scientific reviews. Research papers presented during NPAFC-convened workshops and symposia which are subsequently submitted for publication in NPAFC Technical Reports or Bulletins, do undergo rigorous and anonymous scientific review prior to publication. The Commission generally does not review reports submitted by individual scientists to external peer-reviewed scholarly journals, unless they are being submitted on behalf of the Commission.

Review Panel comment

- *The Review Panel found this Term of Reference to be vague, in the context of how “publications” are defined. The CSRS follows established scientific practice with respect to reports submitted for publication.*

2.6.2 Submission of the Committee's Annual Report to the Commission (ToR I-12).

Reports are prepared for each CSRS and RPCM meeting, including summaries of discussions on agenda items, summaries of the work of the technical sub-groups under CSRS, and records of any decisions made and actions resulting. These are made available in the NPAFC Document series (available on-line) and the CSRS reports are combined with other Committee reports into the Annual Report of the Commission.

Review Panel comments

- *The Review Panel congratulates the CSRS for its detailed record-keeping.*
- *Early practice was to associate each agenda item with its Convention Article or CSRS Term of Reference. This practice has been dropped in recent years. The Review Panel suggests it would be a useful way to track CSRS activities and accomplishments against its Terms of Reference, and recommends that consideration be given to reinstating the practice.*
- *The Review Panel noted that there is another style of reporting which might be useful for the CSRS to consider, in which Action Items are clearly identified and highlighted, and then tracked for completion at the next meeting. There appears to be little follow-up as to whether specific actions requested at previous meetings have been completed. A useful addition to the CSRS agenda might be to include an item at the beginning of CSRS meetings to report on the completion of Action Items from the previous meeting.*

The Review Panel recommends that:

- *CSRS Agenda items be linked with the appropriate Term(s) of Reference;*
- *CSRS provide a table of Action Items from each meeting, and track the completion and status of remaining items at the next meeting.*

2.7 Scientific recommendations

2.7.1 Recommendations to the Commission for the conservation in the Convention Area of anadromous stocks and ecologically-related species of concern designated by the Commission (Article IX(1), ToR I-6).

Measures for the conservation of stocks and ecologically-related species was an agenda item of early meetings by the CSRS until 1997, after which it disappeared from the agenda. No recommendations appear to have been made by the CSRS to the Commission in response to this Term of Reference. With the cessation by the Parties of any high seas fishing for anadromous stocks and the introduction and enforcement of the UN moratorium on high-seas drift-net fishing in the North Pacific, largely coordinated by NPAFC, there has been negligible fishing for anadromous species in the Convention Area. There is therefore no need for stock assessments and regulations which identify conservation measures in regards to fishing activities in the Convention Area. Such assessments and regulations are required for domestic fisheries for anadromous stocks in waters under national jurisdiction, however, these are beyond the mandate of the Commission. The CSRS does play an important role as a forum for discussion of the scientific issues relating to the production of salmonids in national waters, but does not make management recommendations. Nevertheless, the stock syntheses assembled by the Working Group on Stock Assessment in response to invitations from PICES are important works that serve to illustrate the larger status of salmonid stocks in the North Pacific.

Since 2007, ENFO has made formal requests to CSRS to provide scientific information on such topics as migration patterns of anadromous fish, migration routes of squid, tuna and billfish, and temperature and salinity gradients at which anadromous fish and squid, tuna and billfish might typically be found in the Convention Area in order to assist with efficient allocation of enforcement assets for the detection and apprehension of IUU activities. The CSRS noted that this was a large assignment, but that as illegal fishing in the Convention Area is an important issue the CSRS should provide the enforcement committee with as much information as possible. Subsequently, CSRS representatives attended the ENFO Committee meeting in February 2008 and presented information on the oceanography of the North Pacific Ocean, migration patterns of salmon, factors affecting salmon distribution, thermal limits of salmon distribution, overlap of salmon and other species, real-time satellite data, and stock identification of IUU-caught salmon. ENFO requested CSRS to prepare guidelines of sampling methods for stock identification of confiscated salmon, which was delegated to the *ad hoc* Working Group on Stock Identification. ENFO suggested that the presence of a CSRS scientist at the ENFO (or EECM) meetings may be helpful to provide advice on ocean conditions. A similar presentation was made by CSRS to the EECM meeting in Japan in February 2009 and has been requested for 2010.

Review Panel Comments

- *Provision of scientific advice for the purpose of conservation and management is the core activity of most other RFMO's but, because of the particular legal context in which the NPAFC exists, the CSRS does not play a major role in providing advice for the conservation of anadromous stocks in the Convention Area. It also does not have a major role in providing recommendations for the conservation in the Convention Area of ecologically-related species of concern, since, as discussed in Section 2.3 above, these have not been designated by the Commission. However, the CSRS does have an important role in drawing attention to non-fishing scientific issues that may affect the conservation of anadromous stocks in the Convention Area, such as climate change (see, e.g. Beamish et al. (Eds). 2010. Climate Impacts on Pacific Salmon: a bibliography. NPAFC Special Publication No. 2). The recent syntheses of salmonid stock status in the North Pacific assembled by the CSRS for the NPAFC contribution to the PICES Ecosystem Status Reports are critical works that CSRS is strategically well-placed to complete, and to do them well. The Review Panel recommends that CSRS be tasked with conducting such syntheses on a regular basis for transmission to the Commission independent of the invitations from PICES to contribute to its reports.*
- *The recent (since 2007) requests from ENFO for specific information to help target enforcement activities is a positive step towards making CSRS relevant to the central purposes of the Convention (the conservation of anadromous stocks in the Convention Area), in addition to the current CSRS objective of promoting good science and understanding of anadromous species.*
- *The lack of designation by the Commission of "ecologically-related species" has inhibited clear actions and strategic directions by the CSRS in regards to this topic.*

The Review Panel recommends that:

- *the CSRS seek opportunities to provide advice, both internally and externally, in regards to issues affecting the conservation of anadromous stocks in the Convention Area. In this context, it would be helpful for the CSRS to identify its main "goals" or purposes in relation to the Convention, as a preface to its Terms of Reference (i.e. what is the CSRS trying to accomplish?);*

- *the CSRS should be requested to provide advice on issues of the conservation of anadromous stocks in the Convention Area to the Commission, including advice relating to prey and predator species and possible variations due to geographic location and over time.*

2.7.2 Recommendations to the Commission to avoid or reduce incidental taking of anadromous fish in the Convention Area (Article IX(10), ToR I-7).

Article IX(10) authorises the Commission to invite States or entities not party to the Convention to consult with respect to matters relating to the conservation of anadromous stocks and ecologically related species in the Convention Area. The CSRS Terms of Reference extend the consideration of recommendation to activities of the Parties as well.

Discussion of recommendations to avoid or reduce the incidental taking of anadromous fish in the Convention Area was an agenda item for every CSRS meeting from 1993 to 1997, but disappeared from the agenda in 1998. The CSRS has never made any recommendations on this topic at any of its meetings. As between the Parties, incidental takes of anadromous species have been reported by some States (e.g. in U.S groundfish fisheries in 1994 and subsequent years), and plans for surveys which may take salmon incidentally have also been presented to the Committee (e.g. Japanese surveys in 2002 and subsequent years). However, the presentation of this information also appears to have ceased in 2006.

Invitations to states not party to the Convention to participate in meetings is done each year. Annual invitations to Korea eventually led to its accession to the Convention. Annual invitations, including a number of diplomatic despatches and other contacts at the inter-governmental level have, to date, received no response.

Review Panel Comment

- *This Term of Reference has consistently not been addressed by CSRS. Reports of incidental takes of salmon, often in national waters, were provided to the Commission for several years by some countries, but the CSRS made no recommendations as to whether these were significant or how they might be reduced. Recent (since 2006) practice has been to remove this item from the agenda. The recent stock synthesis by the Working Group on Stock Assessments suggests that incidental take of salmon in the Convention Area is not a significant problem.*

The Review Panel recommends that:

- *the CSRS be requested to examine specifically the issue of incidental takes of salmon in the North Pacific to determine if it is an issue, and if so, make recommendations on how these may be mitigated.*

2.8 Functions of the CSRS

Review of the existing CSRS structure efficiency (Rules of Procedure 11, ToR I-10).

Rule of Procedure 11 provides for the establishment of the CSRS. It states that its functions shall be to investigate matters of scientific research and statistics referred to it by the Commission and to submit reports and recommendations to the Commission concerning such matters.

The CSRS meets annually, with interim, or intersessional, meetings of the RPCM taking place at approximately the 6th month interval to update progress on outstanding issues and to consider new issues. The main purpose for the RPCM is to plan and coordinate research activities. The CSRS has established several subsidiary bodies, with differing degrees of formality ranging from formal Working Groups to *ad hoc* Working Groups to multi-year project, editorial, and symposia and workshop organising committees (see Table 2.4 below). A number of early Working Groups have been disbanded, such as that on Methodology Standardisation, which completed its work and was disbanded in 1999. In 2010 there was only one *ad hoc* Working Group, that on Stock Identification, which was established in 1999. The CSRS has responded to requests for information from ENFO to help plan the allocation of enforcement activities by the Parties (see Section 2.7.1, above).

Review Panel comments

- *Rule of Procedure 11 calls for one Representative, and experts and advisors, from each Party. Recent lists of CSRS members provide names of 'Primary Points of Contact' to CSRS for each Party, and for many Parties two names are indicated. It is not clear as to who is the Representative and who can vote should voting issues arise.*
- *The Terms of Reference for the CSRS are still referred to as "interim".*
- *The ad hoc Working Group on Stock Identification has been in existence since 1999, but on an ad hoc basis. The Review Panel recommends that its status be formalised. The Review Panel also notes that, according to the NPAFC organisational chart (Fig. 2), all Working Groups of the CSRS interact with the Science Sub-Committee (noting there is no Statistics Sub-Committee), yet all these Working Groups appear to report directly to the CSRS rather than to the Science Sub-Committee.*
- *Other than the general Terms of Reference for the CSRS and the usual business those entail, it is difficult to find any specific scientific matters referred to the CSRS by the Commission or reports arising there from. The only exception appears to be the recent requests for the CSRS to provide information to ENFO to assist with allocation of enforcement assets.*

The Review Panel recommends that:

- *the terms of reference for the CSRS should be re-evaluated, updated, and formalised;*
- *the reporting structure of Working Groups should be made more explicit and/or the roles of the Science Sub-Committee re-evaluated;*
- *the Working Group Terms of Reference and objectives be made more explicit, as was done for some but not all CSRS Working Groups (Table 2.4). This would provide each Working Group with a clear set of goals and a clear standard against which progress towards these goals can be determined;*
- *the Commission give careful consideration to how to better utilise CSRS to ensure fulfillment of the objectives of the Convention.*

Table 2.4. Major subsidiary bodies to the Committee on Scientific Research and Statistics.

| Body | Date formed | Date dissolved | Purpose |
|---|-------------|---|---|
| Statistical Yearbook Working Group | 1993 | unclear (does not appear to have been formally dissolved) | Provide recommendations on data and formats for the NPAFC Statistical Yearbook. Duties taken over by Secretariat. |
| Science Sub-Committee | 1995 | on-going | Focus for preparation and review of NPAFC Science Plans |
| Working Group on Methodology Standardisation | 1995 | 1999 | Provide a review and recommendations of routine survey methods currently in use for oceanographic and fisheries sampling among NPAFC Parties. Findings reported in NPAFC Doc. 256 Rev. 2. |
| Working Group on Stock Assessments | 1995 | on-going | Coordinate statistics and data analyses for the Commission |
| Working Group on Stock Identification and Growth | 1995 | 1997 | Examine and recommend methods for identification of stock origins of anadromous species. Final report as NPAFC Doc. 223 Rev.1. |
| <i>Ad Hoc</i> Working Group on Salmon Marking | 1998 | Removed " <i>ad hoc</i> " status in 1999; on-going | Examine and recommend resolution of issues relating to thermal marking to anadromous stocks. Made a `permanent` Working Group in 1999 (NPAFC Doc. 455, p. 455-22) specifically to address issues of coordinating thermal marking of otoliths. |
| <i>Ad Hoc</i> Working Group on Archival Tags | 1998 | 1999 | Examine and recommend progress on use of archival tags; final reports as NPAFC Docs. 412, and 425. |
| <i>Ad Hoc</i> Working Group on Stock Identification | 1999 | on-going | Terms of Reference: (1) develop, standardize, and disseminate genetic and other databases among the Parties; (2) encourage the development of new genetic technologies; and (3) facilitate the dissemination of statistical techniques. |
| BASIS Working Group | 2001 | on-going | Terms of Reference: coordinate individual national research plans; draft an annual implementation plan for joint BASIS research; draft an annual report to summarize BASIS results; prepare proposals for external funding. |
| Working Group on Salmon Tagging | 2007 | on-going | Terms of Reference: 1) manage the high-seas tagging database including the current INPFC - NPAFC tagging data and the future tagging activities, 2) coordinate the high-seas tagging experiments, 3) collect the release and recovery information and distribute them among the Parties, 4) report the annual summary of the high-seas tagging activity to the CSRS, 5) format disc tags with NPAFC logo for its future use, and 6) encourage reporting tag recoveries from the public. |

Chapter 3

Enforcement According to the Provisions of the Convention – The Committee on Enforcement (ENFO)

3.0 Introduction

Pursuant to the Convention enforcement efforts are directed at enforcing the prohibition on directed fishing for anadromous stocks in the Convention Area and the obligation to minimise incidental catch as set out in Article III and the Annex to the Convention, as well as the obligation to prevent and punish trafficking in anadromous fish taken in contravention of the Convention. Since 1993, when Japan announced the cessation of its high seas salmon fisheries, no authorised directed fishing for anadromous stocks has been conducted in the Convention Area by the Parties. Enforcement issues therefore largely relate to incidental catch in other, predominantly driftnet, fisheries and to the activities of non-Parties.

Issues relating to enforcement in the Convention Area are addressed within the Committee on Enforcement (ENFO) which was established in 1993 pursuant to Article VIII(8) and Rule of Procedure 10 to investigate, report and make recommendations on matters of enforcement and such other matters as the Commission may refer to it. ENFO's Terms of Reference (ENFO-TOR) are derived from Articles III, IV, V, VI and IX of the Convention and provide that it is responsible for, *inter alia*, coordination of monitoring and enforcement efforts; exchange of information on unauthorised fishing activities and illegal import and export of salmon; and review and evaluation of measures to avoid or reduce incidental taking of salmon. Originally a sub-committee of the Committee on Enforcement, Finance and Administration, ENFO became a full, separate committee in 1994. Its membership consists of one Representative from each party together with their experts and advisors. ENFO meets every year and reports to the Annual Meeting.

3.1 Coordination of Efforts to Prevent Unauthorized Fishing Activities and Trafficking in Illegally Harvested Anadromous Fish

3.1.1 *Nature of measures to prevent trafficking in anadromous fish taken in violation of the prohibitions provided for in the Convention and to penalize persons involved in such trafficking (Article III)*

International trade data prior to 1992 showed that, despite the prohibition on high seas fishing for anadromous fish in Article 66 of the LOSC, non-salmon producing countries were exporting canned and frozen salmon, much of which was believed to have been illegally caught on the high seas. Article III(3) of the Convention therefore requires the Parties to take appropriate measures, individually and collectively, to prevent trafficking in anadromous fish taken in violation of the Convention and to penalise persons involved in such trafficking. Article IX(2) authorises the Commission to promote the exchange of information on trafficking activities and responses thereto, and Article IX(13) authorises the Commission to recommend to the Parties any measures

needed to further the attainment of the objectives of the Convention. ENFO-TOR require the exchange of information on trade and suspected trafficking in anadromous fish taken in violation of the Convention and provide for the development, as necessary, of a Certificate of Origin program in accordance with Article IX(7) as well as the possible development of recommendations to the Commission for additional action to be taken by the Parties to ensure effective and diligent enforcement.

Article III requires action to be taken both individually by the Parties and collectively by the Commission. In terms of individual action, the extent to which the Parties have adopted legislation to prevent and penalise trafficking in anadromous fish taken in contravention of the Convention, either by their nationals or non-nationals, is unclear. Prosecutions in the United States reported on in 1993 give rise to the presumption that the United States has relevant legislation in place. In addition, between 2000 and 2003 Japan reported to ENFO that it had taken measures against North Korea, Taiwan and China to prevent the illegal transshipment of salmon and that imports of salmon and salmon products from these countries are subject to an approval process which requires proof that the fish were not taken in contravention of the Convention. In 2002 Japan reported that foreign fishing vessels were restricted from entering Japanese ports directly from the fishing ground. In response to the survey sent by the Review Panel, Canada reported that it prevents trafficking in anadromous fish taken in violation of the prohibition provided in the Convention through the *Fisheries Act (R.S., 1985, c. F-14)* and *Fishery (General) Regulations (SOR/93-53)* (control of nationals) as well as the *Coastal Fisheries Protection Act (R.S., 1985, c. C-33)* and the *Coastal Fisheries Protection Regulations (C.R.C., c. 413)* (control foreign vessels entering ports). These measures control both nationals and foreigners and the movement of fish. Both of these regulations have provisions for the prosecution and penalisation of violators. No other responses were received by the Review Panel and ENFO minutes contain no record of the relevant legislative provisions that may have been enacted by the Parties pursuant to this obligation.

In terms of collective action, in its early years the Commission reviewed international trade data. At the inaugural ENFO meeting in 1993 Canada and the United States presented information on international trade in 'laundered' salmon in selected Asian countries and the United States reported on 1992 prosecutions for illegal trafficking in high seas salmon. Further reports were presented at the annual meetings in 1994 and 1995. From 1996 to 1999 Canada and the United States presented statistics on their domestic trade. Japan presented statistics on domestic imports and exports of anadromous fish from 1993 to 2003. Russian statistics were provided in 1996. However, no actions were taken or recommended by ENFO to actively deal with the problem.

In 1993 the United States tabled a proposal for a Certificate of Origin Program for Pacific Salmon to enable verification of the provenance of fish entering the market. The proposal met with some resistance and it was agreed that Canada and the US would work together on a revised proposal. In 1996 it was agreed there was insufficient evidence to suggest sales of salmon which had been caught illegally in the Convention Area. The Parties therefore agreed that further expenditure of time and effort on the Program was not necessary. The item 'Program of Certificates of Origin' was retained on the ENFO agenda for 1997, where it is noted as having received 'no comments from the Parties', and was dropped thereafter.

Nevertheless the issue of trafficking in anadromous fish and possible responses thereto periodically resurfaces in ENFO. In 1999 the Parties identified as a possible issue the need to pay more attention to salmon imports as a barometer of potential illegal high seas drift net fishing. It was decided that rather than collecting this type of information, a better indicator would be reports from salmon exporters in the Parties where they have observed large quantities of salmon in the marketplace from non-traditional sources. ENFO reports show no further reference to this. In 2000 Canada reported on concerns as to the origins of canned salmon imported from Korea and China. It was ultimately ascertained that the fish had been caught in waters under national jurisdiction and then shipped overseas for processing. However, a warning note was sounded as to the continuing possibility of laundering salmon caught on the high seas. In 2001 the United States proposed the development of a framework for market analyses to ascertain the incidence of trafficking in illegally caught salmon. This does not appear to have been followed up. Instead, attention was focused in 2005 and 2006 on the possible adoption of port state control measures within the NPAFC. Tellingly, one objection to the introduction of such measures was that without a Certificate of Origin establishing the provenance of the fish, port state measures would be impossible to implement. In 2007 it was decided that, given the international efforts to negotiate a global agreement on port state measures, any discussion of the topic within the NPAFC was premature and it had not been revisited.

At the 2007 EECM, the Parties reported on their individual efforts to enlist the assistance of their own domestic fishing organisations in gathering intelligence on illegal salmon harvests or trafficking from the Convention Area. It was concluded that all the Parties have some form of active or passive communication with fishing vessels with varying levels of formality involved. Perhaps the most formal of these is the United States practice of issuing Notices to Mariners with information about how to contact Coast Guard officials in the event suspicious fishing activity is seen. Japan has also indicated that it has received information from its fishing vessels relating to possible driftnet activity. This is reported on in the annual review of enforcement activity. However, the efficacy of these measures vis-à-vis the trafficking issue has never been assessed.

Review Panel comments:

- *No regularised institutional mechanism has been established for the ongoing collection and review of trade data from which the Commission can ascertain levels of illegal trafficking and the need for continued vigilance.*
- *The desire for a Certificate of Origin Program appears to have been overtaken by the cessation of high seas fishing for anadromous stocks by the Parties and by the strong at-sea enforcement operations conducted by the Parties in support of the Convention and the HSDN Moratorium. Nevertheless, as is clear from recent ENFO reports the possibility of illegally caught fish entering the market still exists. Reference is made, for example, to the RONG SHENG-828 incident in 2007 where the Indonesian flagged vessel was arrested by Russia with a significant amount of salmon onboard, packaged ready for unidentified markets. The adoption of documentation and certification programs to ensure traceability of catch is becoming increasingly prevalent in RFMOs. Given the cost and complexity of the implementation of these programs, and the fact that unauthorised fishing in the Convention Area appears to have been significantly curtailed, the applicability of a Certificate of Origin Program may now be less relevant to the NPAFC. This has not, however, ever been*

reexamined in light of recent and current information. Instead its non-existence has been used as an excuse to avoid taking action in other ways.

- *In 2009 a comprehensive global agreement on port state measures was adopted. The relevance and applicability of this agreement has not been considered by ENFO.*

The Review Panel recommends that:

- *ENFO conduct a comprehensive study of the suitability, applicability, rationale for, structure and potential cost of a possible Certificate of Origin Program, particularly with a view to assessing its cost/benefit as against at-sea enforcement operations, in order to ensure the Parties are complying with their obligations under Article III(3);*
- *the Parties be encouraged to become parties to the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, and that ENFO analyse its applicability to the NPAFC context and provide recommendations to the Commission thereon.*

3.1.2 Draw attention of any State or entity not party to the Convention to matters relating to the fishing activities which could affect adversely the conservation of anadromous stocks within the Convention Area (Article IV)

This Review Criteria appears internally contradictory in that it has been included under the criteria relating to coordination of efforts to prevent unauthorised trafficking in illegally harvested anadromous fish but refers to Article IV pursuant to which the Parties agree to invite the attention of non-contracting parties and entities (NCPs) to any matter relating to the fishing activities of its nationals, residents or vessels which could adversely affect the conservation of anadromous stocks in the Convention Area (Article IV(1)). Trafficking activities may not necessarily be related to fishing activities and fishing activities which could adversely affect the conservation of anadromous stocks might not necessarily be related to trafficking activities. The Review Panel therefore considers it appropriate to adopt a broad approach to the issue. Under Article IV(2) the Parties also agree to encourage NCPs to adopt laws and regulations consistent with the Convention in regard to fishing operations conducted by their nationals, residents and vessels.

There are two aspects of the duty to alert NCPs. The ‘drawing of attention’ may relate to individual instances of fishing or other activities that are inconsistent with the objectives of the Convention or it may relate to the need to make NCPs aware of general patterns of behavior. Both of these aspects of the duty may be carried out by the Parties acting unilaterally or by and through the Commission.

Since the early days ENFO has acted to determine which NCPs might be involved in directed fishing for or the incidental catch of anadromous fish in the Convention Area and then to bring those activities to the attention of the relevant states. Starting in 1993 requests were made to the Republic of Korea, China, Taiwan and North Korea for information on all known former commercial driftnet vessels and over the years, as vessels from these NCPs have been sighted engaged in high seas driftnet fishing the Parties have made representations both unilaterally and through the Commission. Unilateral representations include those made to NCP flag states during individual enforcement operations in order to verify flag and requesting the flag state either to

take action or to allow the enforcing Party to do so. An example of this was the case of the Honduran flagged *Arctic Wind* when, in 2000, the United States sought and received consent from the flag state to arrest and prosecute the vessel. Unilateral representations have also been made by individual Parties to Taiwan, Indonesia and Georgia, such as those made by Japan in respect of the *Chun Jin No. 1*, a vessel flagged in Georgia and owned by a Taiwanese company. Pursuant to the bilateral United States-China Shiprider Agreement the United States also regularly brings the activities of Chinese vessels to the attention of China for the purposes of identifying and ensuring enforcement action is taken against those vessels found contravening the Convention and the Driftnet Moratorium. The United States has also been developing MOUs with Taiwan and Indonesia to enable real time information sharing in relation to suspect vessels and activities.

At the Commission level, the Parties have acted to bring to the attention of China the continuing prevalence of Chinese-flagged driftnet vessels operating in the Convention Area. In 2006 a formal démarche was sent to China requesting it to take preventative measures to ensure Chinese vessels are not involved in HSDN fishing which could adversely affect salmon stocks in the Convention Area. The Parties have continued to attempt to engage with China through both formal and informal channels, thus far with no success. In view of the failure of high level approaches since 2007 the Parties have attempted to engage on the lower level inter-agency level, inviting Chinese enforcement personnel to attend NPAFC meetings and enforcement workshops. To date these approaches have also received no response. In 2006 and 2007 formal representations were made by the Commission to Georgia and Indonesia respectively regarding the activities of their vessels and nationals.

In terms of encouraging NCPs to adopt laws and regulations consistent with the Convention it is notable that in its early years the Commission repeatedly called upon its members to encourage NCPs to become party to the FAO Compliance Agreement. Representations have also been made by the Parties to states whose vessels have been identified as engaging in high seas driftnet fishing to encourage the adoption of legislation implementing the HSDN Moratorium. The Parties have also made representations on behalf of the Commission in other fora, including the Western and Central Pacific Fisheries Commission (WCPFC), the International Monitoring Control and Surveillance Network (MCS Network) and the North Pacific Coast Guard Forum (NPCGF). In 2008, representations by Commission members in the WCPFC on the high seas driftnet concerns in the North Pacific were instrumental in the adoption, by that organisation, of a conservation and management measure banning the use of driftnets on the high seas by WCPFC members.

Review Panel comments:

- *There is no question but that the Parties have assiduously attempted to engage NCPs in the Commission's mission by drawing their attention, both during actual enforcement operations and after, to the activities of their vessels, nationals and residents which might affect adversely the conservation of anadromous stocks in the Convention Area. The Parties and the Commission should be commended for their work in meeting their obligations in this regard.*
- *The Commission needs to seriously consider what else can be done to engage NCPs. In this respect the Review Panel notes that the voting procedures in the Commission are a disincentive to NCPs given that only states of origin can vote on matters of substance. In*

2009 the United States proposed the establishment of a Cooperating Non Member category. The other Parties all indicated the need for further reflection.

The Review Panel recommends that:

- *the Commission give priority consideration to the analysis and design of a Cooperating Non-Member status within the Commission to accommodate the needs of NCPs and better enable their cooperation with the Commission.*

3.1.3 Nature of measures taken by Parties to prevent transferring vessel registration for the purpose of avoiding compliance with the provisions of the Convention (Article IV)

Article IV(3) requires the Parties to take measures aimed at preventing their own vessels from reflagging to escape the controls of the Convention. ENFO minutes contain occasional oblique references to but not record of the relevant legislative provisions that may have been enacted by the Parties pursuant to this obligation. In response to the survey circulated by the Review Panel, Canada reported that although it has regulations governing the transfer of vessel registrations, it has no regulations in place that would prevent the transfer of registration for the purpose of avoiding compliance with the provisions of the Convention. The regulatory position of the other Parties is unknown. It is noted that all Parties, except Russia, are party to the FAO Compliance Agreement. The Commission has regularly called upon the Parties to encourage NCPs to accede to the Compliance Agreement. However, it is unclear what other steps the Commission has taken to monitor and ensure fulfillment of this obligation by the Parties.

Review Panel comments:

- *Re-flagging to escape controls has been a serious issue in all RFMOs. However, it is unclear to what extent the practice of re-flagging represents a threat to the attainment of the objectives of the NPAFC.*

The Review Panel recommends that:

- *ENFO prepare a study of the measures that have been adopted by the Parties to prevent reflagging for the purpose of avoiding compliance with the Convention and provide recommendations to the Commission on what further (if any) measures the Parties should consider adopting in order to ensure their full compliance with the obligation.*

3.2 Cooperative Mechanisms to Detect and Deter Illegal Fishing in the NPAFC Convention Area

3.2.1 Cooperation in taking legal actions against directed fishing for and the minimization of incidental taking of anadromous fish in the Convention Area (Article IV)

Article IV(4) requires the Parties to cooperate in taking action, consistent with international law and their respective domestic laws, for the prevention by any State or entity not party to the Convention of any directed fishing for, and the minimization by such State or entity of any incidental taking of, anadromous fish by nationals, residents, or vessels of such State or entity in the Convention Area. In other words, Article IV(4) deals with the obligations of the Parties vis-à-

vis NCPs. With the cessation of all high seas fishing for anadromous stocks by the Parties, this provision has become of central importance to the activities of the NPAFC with nearly all enforcement activity within the Convention Area being directed against NCP HSDN vessels.

Clearly the Convention does not bind NCPs. They are, however, bound by the LOSC obligation to refrain from fishing for anadromous stocks on the high seas. In addition, the HSDN Moratorium calls on all states to take measures, collectively and individually, to prevent large scale pelagic driftnet fishing on the high seas. The combination of the LOSC and the Moratorium appears to provide the legal basis for the extensive at-sea enforcement action against NCPs in which the Parties engage. In addition, the bilateral United States – China Shiprider Agreement which operates to support the Moratorium, provides the particular legal basis for the apprehension of Chinese HSDN vessels by the United States.

Cooperation between the Parties is both institutional and operational. On the institutional level cooperation takes place within ENFO and its subordinate bodies. In its early years ENFO essentially acted as a clearing house for information on national monitoring and enforcement activities. In 1999 the Parties held an Enforcement Standardisation Symposium, the outcomes of which were two-fold: increased inter-personal and inter-agency relations; and the development of a list of questions relating to standardisation of enforcement practices which formed the basis of subsequent discussion and action by ENFO in designing its cooperative mechanisms. Since then, ENFO has developed a more sophisticated role in coordinating cooperation in enforcement.

In 2000 ENFO initiated its annual inter-agency Enforcement Evaluation and Coordination Meetings (EECM). These meetings are attended by the agencies directly responsible for planning and execution of enforcement activities within the Parties. EECM are held intersessionally and are now scheduled in February/March to allow the Parties to discuss and coordinate their enforcement plans and resources for the coming fishing season, to clarify the organisational structures of their agencies responsible for enforcement, to identify points of contact within those agencies to allow timely communication of relevant information, and to identify and address information needs to improve and standardise enforcement practices. Since 2000 the agencies directly responsible for enforcement activities also attend the annual ENFO meetings.

In 2001, a Joint Operations Information Coordination Group (JOICG) consisting of an *ad hoc* group of enforcement personnel from each of the Parties, was created to assist in coordinating enforcement activity. Initially the group was physically hosted in Alaska. After the first year it was decided that physical co-location was unnecessary and that the activities of the group have since been carried out by telephone and email. Points of contact for JOICG are identified in each Party and communicated to the Commission. Details are updated annually. In 2002 ENFO adopted a ‘Concept of Operations’ which sets out the purposes of, and *modus operandi* for, the permanent exchange of enforcement information amongst the JOICG. This process is designed to expedite the passing of information gained from aerial patrols to on-water assets and to the flag states concerned.

In 2002 ENFO established an Enforcement Procedures Working Group (EPWG) to work on threat analysis and vessel profiling to enable more coherent targeting of enforcement assets. After reporting back in 2003 the EPWG was tasked with developing guidelines for enforcement

A signal feature of the NPAFC has been cooperation in personnel exchanges and in joint and combined operations. Since 1991 Canada has conducted air surveillance patrols over the Convention Area from air bases in the United States (Alaska and Hawaii) and with both Canadian and US enforcement personnel on board in support of United States Coast Guard seaborne surveillance. Japan's participation in joint operations and personnel exchanges has been limited; ENFO and EECM reports repeatedly noting Japan's position that it is only able to contribute to a limited extent. Nevertheless, in 2007 Japan engaged in a joint operation with the United States. The Parties also cooperate in training activities sponsored by the NPAFC. In 2006 the Parties held an Enforcement Symposium followed, in 2009, by a workshop on patrol tactics to further develop skills and enhance inter-agency contacts and cooperation.

The success of these operations may be gauged from the figures of detections and apprehensions within the Convention Area as set out in Table 3.1 below.

Table 3.1
Detections and Apprehensions of HSDN vessels reported by the Parties 1993-2009

| Year | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Detections | 6 | 1 | 3 | 1 | 6 | 9 | 11 | 2 | 0 | 0 | 0 | 1 | 0 | 26 |
| Apprehensions | 2 | 0 | 1 | 1 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |

| Year | 2007 | 2008 | 2009 |
|---------------|------|------|------|
| Detections | 47 | 11 | 0 |
| Apprehensions | 7 | 2 | 0 |

Review Panel comments:

- *The apparently high level of successful international cooperation in the planning and execution of enforcement activities is the hallmark of the NPAFC and is the envy of other RFMOs. The Commission should be congratulated on the strong emphasis it has placed on the development of inter-personal, inter-personnel and inter-agency relationships which has contributed to and ensured the success of its collaborative and cooperative enforcement operations.*
- *Nevertheless, while there is very high degree of cooperation and coordination between the United States, Canada and, increasingly, Russia, the Review Panel notes a significant degree of reticence on the part of Japan to fully engage in enforcement operations against NCPs, as well as the total absence of participation by Korea in enforcement activities. The international aspects of the enforcement burden are borne unevenly by the Parties. There is a strong perception of a lack of commitment on the part of some Parties to their obligations under the Convention. In 2009 Korea advised that it was preparing an MOU with the United States Coast Guard which could better able its participation in enforcement activities in the future. Other possibilities for increasing the engagement of Korea in NPAFC enforcement activities should also be examined.*

The Review Panel recommends that:

- *all possible avenues be explored for assisting Korea to comply with its enforcement obligations under the Convention;*
- *the status and function of the EPWG be reviewed and, if appropriate formalised with dedicated terms of reference and a clear reporting structure.*

3.2.2 Measures taken to ensure that nationals and fishing vessels of the Contracting Parties comply with the provisions of the Convention (Article V)

Article V(1) obliges each Party to take all necessary measures to ensure that its nationals and fishing vessels comply with the Convention. Article V(2) establishes a procedure for reciprocal at-sea enforcement as between the Parties which includes provisions relating to the gathering of evidence and hand over of arrested vessels. Only the flag state may try the offence and impose penalties. Penalties are to be commensurate with the serious nature of the infraction, taking into account proposals made by the Commission pursuant to its authority under Article IX(3) to consider and make proposals for a schedule of equivalent penalties.

It is impossible to ascertain the precise nature and extent of the measures taken by the Parties pursuant to Article V(1) from ENFO reports. However, ENFO reports note that at-sea patrols by Russia and Japan are targeted at ensuring compliance by their vessels with the Convention and there is no evidence of Canadian or United States vessels fishing in contravention of the Convention. Application of the reciprocal regime also appears to have operated successfully. In 2003, for example, the United States boarded two Korean vessels and turned the evidence over to Korea. Information has also been passed by the Parties to Russia about Russian vessels suspected of violating the Convention.

The issue of harmonisation of penalties has not, however, fared so well. This issue was discussed between 1994 and 1996 when it was concluded that harmonisation of penalties would be difficult but that maximum penalties should be adopted in order to optimise their deterrent effect. The issue was removed from the ENFO agenda in 1998.

Review Panel comments:

- *A significant feature of the NPAFC is the apparent high degree of compliance by the Parties with the obligations to refrain from directed and incidental fishing for anadromous stocks.*
- *The reciprocal enforcement scheme has been implemented effectively and appears to have achieved the deterrent effect it was intended to have inter-partes.*

3.2.3 Cooperation in exchange of enforcement information, including contraventions, disposition of cases and directed or incidental taking of anadromous fish in the Convention Area by nationals, residents and vessels of any State or entity not party to the Convention (Article VI)

Article VI(1) requires cooperation in the exchange of information on any activities contrary to the Convention. Article VI(2) requires cooperation in the exchange of information on enforcement action and the disposition of cases while VI(3) requires cooperation in the exchange of

information regarding any directed fishing and incidental catch of anadromous fish in the Convention Area by NCPs.

Cooperation in the exchange of enforcement information takes place at four levels: 1) during the patrol planning and coordination phase in the EECM; 2) during real time enforcement operations; 3) at ENFO meetings after completion of the enforcement season; and 4) at EECM and ENFO meetings during the follow-up phase.

With respect to patrol planning and coordination, since 1999 the Parties have engaged in increasingly detailed information exchanges in the actual planning, coordination and execution of enforcement activities. The process begins in the EECM where the Parties review the annual threat assessment for the purpose of knowing where and when to target enforcement assets and then enforcement agency experts and advisors announce their proposed enforcement operations for the coming season and discuss areas for possible coordination and rationalisation. The need for scientific information on salmon biology and ocean conditions to enable accurate targeting of enforcement effort is now being met by annual requests for information from ENFO to the CSRS. The CSRS has also prepared a stock identification list for enforcement purposes. The need to distinguish between fishing vessels and vessels engaged in fisheries research or other activities is addressed through the provision of lists of research vessels, and analysis of shipping and other information. Since 2008 Canada has also been trialing the use of satellite technology. Ongoing improvements in inter-agency cooperation and communication are addressed through the planning of joint missions, training exercises and workshops. Discussions in EECM are not limited to planning for the upcoming season. Other issues raised have included the applicability of port state control measures, cooperation with the North Pacific Coast Guard Forum (NPCGF), and methods for gathering intelligence on illegal salmon harvests or trafficking from the Convention Area.

During the fishing season, the Parties exchange information through inter-agency contacts within the JOICG. Also since 2003, the Commission has supported the development, by Russia, of an Integrated Information System (IIS) for the centralisation and coordination of information on suspected and actual activities contrary to the Convention for the purpose of assisting in real time enforcement operations. With the introduction of the IIS, the parties are now able to exchange information on an ongoing basis in real time throughout the year. In theory, information on sightings can be uploaded immediately to enable the strategic and timely deployment of enforcement assets. In practice, there appears to be a degree of inconsistency in the uploading of information, making successful apprehension more problematic. Use of the IIS is voluntary, and it is still undergoing development of its technical and operational aspects, including the addition of sections on species, vessel and gear codes, and a list of IUU vessels.

At the annual ENFO meetings the Parties generally, although not always, provide written reports detailing the length and frequency of their annual enforcement operations, the enforcement platforms used (ie vessel, aircraft, satellite), numbers of suspicious vessels detected, numbers of apprehensions, details of unsuccessful attempts to apprehend, details of contacts with flag states and details of any prosecutions and penalties received. On occasion these reports are supplemented with the display of photographic or video footage showing suspicious vessels, actual violations, demonstrations of enforcement procedures or actual enforcement actions taken.

Other information exchanged has included information on the Parties laws in regards to the activities of stateless vessels.

During the final phase of information exchange the Parties report to the EECM and ENFO on the results of investigations and prosecutions of violations including description of penalties imposed. In recent years genetic sampling has been used to identify the state of origin of the fish allowing definitive calculation of the economic loss to the coastal state. The Parties also report on follow up of diplomatic contacts with flag states.

Review Panel comments:

- *There is an excellent level of cooperation in information exchange both for the purposes of planning and executing enforcement objectives and for the purposes of reporting on their outcomes. The Review Panel notes, however, that according to ENFO reports Korea has yet to participate in enforcement activities or provide any report on any substantive actions taken.*
- *Development of the IIS is a major achievement in ensuring timely exchange of information for the purposes of coordinating enforcement action in real time. This a potentially powerful tool which the Parties should be encouraged to make full use of. The system is under continuous development and reports on its updated functionality are provided annually. However, the Review Panel notes that the development, control and locus of the IIS rests with Russia, not the NPAFC, and is heavily dependent on the efforts of one individual. As a dedicated NPAFC system, consideration should be given to centralising the infrastructure for the IIS at the Secretariat.*

The Review Panel recommends that:

- *the IIS should be centralised and housed within the Secretariat which should be appropriately resourced to operate, maintain and develop the system. Consideration could be given to reviving the Enforcement Procedures Working Group or establishing a specialised committee to guide further and ongoing development of the IIS.*
- *consideration should be given to the means by which Korea can be integrated into enforcement operations so that it is better able to benefit from and contribute to the information exchanges required by the Convention.*

3.2.4 Review and evaluation of enforcement actions taken by the Parties (Article IX)

Review and evaluation of the enforcement actions taken the Parties is done under the authority of Article IX(5). This is a core function of ENFO and, since 2000, is carried out in two stages. The annual EECM evaluates the results of enforcement actions taken in the previous year and plans and coordinates enforcement operations for the upcoming fishing season, including patrol dates and areas and joint enforcement coordination. ENFO then reviews and evaluates the enforcement and any follow up actions taken during the year.

ENFO review of EECM and national enforcement reports during the Annual meeting focuses more on the outcomes of enforcement activity and discussion of ‘policy’ issues. In addition to details of detections, apprehensions, unsuccessful attempts at apprehension, reports on investigations, the instigation and conclusion of legal proceedings, and contacts with NCPs,

recent issues canvassed have included definitions of ‘vessel of interest’ for the purposes of the IIS and recovery of abandoned driftnets. ENFO reports indicate a high level of satisfaction among the Parties with enforcement activities. Nevertheless, there is a high degree of overlap between the information presented in both the EECM and ENFO reports and a high degree of inconclusive discussion on a range of topics. Many of the ENFO-TOR are not and never have been addressed as ENFO has increasingly focused on the operational aspects of enforcement rather than on the ‘policy’ side of its role in making recommendations to the Commission. In addition, the information presented in both EECM and ENFO indicates a growing level of confusion over the Commission’s enforcement objectives with enforcement information increasingly referring to HSDN activities unrelated to the targeting of anadromous stocks.

Review Panel comments:

- *The Commission can only be congratulated on the extensive reviews that it conducts of enforcement activities and its ongoing evaluation of their efficacy. However, there is a large degree of overlap and duplication of effort between the EECM and the ENFO meetings, both in terms of personnel attending and in terms of the substantive agenda.*
- *The timing of the EECM is designed to meet operational needs to plan and coordinate annual enforcement efforts. Extensive participation by enforcement agencies in the EECM is both logical and critical. The need for their participation in ENFO meetings is, however, less clear.*
- *The ENFO-TOR appear to be out of date with several ENFO-TOR never having been addressed.*

The Review Panel recommends that:

- *the agendas of EECM and ENFO should be reviewed to ensure better rationalisation of activities and resources and to avoid the duplication in discussion and reporting that currently occurs;*
- *the ENFO agenda should track completion and outcomes of policy discussions to ensure follow-up at subsequent meetings and meaningful conclusions with respect to the possible adoption of recommended measures to be taken by the Parties;*
- *participation by enforcement personnel in the annual ENFO meetings should be reviewed;*
- *ENFO-TOR should be reviewed and updated to better reflect the contemporary enforcement needs of the Commission.*

3.2.5 Cooperation with relevant international organisations (Article IX)

Cooperation with relevant international organisations has been a standing agenda item for ENFO since 1994. In the early years ENFO sought collaboration with NASCO to discuss enforcement issues of mutual concern. NPAFC relations with NASCO have, however, more consistently, focused on scientific issues and invitations from ENFO ceased after 1999. In 2000 ENFO offered its assistance and expertise in enforcement issues to the FAO during the drafting of the IPOA-IUU and in 2002 the FAO attended the ENFO meeting as an observer. Despite an initial lack of consensus in 2005, since 2006 ENFO has also extended invitations to the WCPFC and has sought increased cooperation with its Technical Committee on Compliance (TCC). An MOU is currently being prepared between the two organisations to enhance enforcement cooperation and ensure the sharing of information on driftnet fisheries.

Of particular relevance to the NPAFC has been the emergence of the North Pacific Coast Guard Forum (NPCGF). While the mandate of the NPCGF extends beyond salmon and fisheries in general to include other illegal activities such as people and drug smuggling, many agencies that participate in ENFO also participate in the NPCGF which has the added participation of China. The NPCGF also coordinates member states' air and sea patrols in the Convention Area. There is thus considerable potential for overlap and duplication of effort. In 2008 the NPAFC, WCPFC and NPCGF participated in the first North Pacific Tripartite Illegal, Unregulated and Unreported (IUU) meeting. The meeting resulted in information exchange and a general awareness of the work undertaken by each organisation as well as identification of any overlaps. Potential areas for collaboration were also identified.

Review Panel comments:

- *The Commission extends invitations to participate in its meetings to the logical organisations. It appears to be building a fruitful relationship with the WCPFC and thanks to its overlapping membership it already has significant contacts with the NPCGF. Indeed, because of this overlap of functions, in 2004 Canada proposed merging the meetings of ENFO and the NPCGF to save money and avoid duplication. More recently Japan has suggested discontinuing the EECM meetings to save money on the basis that the same work is being done in the NPCGF. The Review Panel notes the financial and other concerns behind the suggestions to discontinue ENFO and/or the EECM. However, in addressing this issue the Parties need to be mindful of their legal obligations under the Convention which must be satisfied independent of their involvement in the NPCGF.*
- *In 2009 the United States reported to ENFO on the negotiations underway for the establishment of a North Pacific RFMO to deal with bottom fishing in the North Western Pacific in which all of the Parties to the NPAFC are also involved. The Review Panel notes there will be a need for cooperation between the two organisations to ensure that the objectives of the NPAFC are not compromised by fishing activities carried out under the auspices of the new RFMO.*

The Review Panel recommends that:

- *the Commission should review the extent of duplication between EECM and NPCGF with a view to carefully articulating its enforcement needs and ensuring compliance with its mandate under the Convention;*
- *the Commission should consider the rationale and modus operandi for how best to engage with the North Pacific RFMO.*

3.2.6 *Invitations to States or entities not parties to the Convention to consult and cooperate with the Commission with respect to matters relating to the conservation of anadromous stocks (Article IX)*

Invitations to NCPs has been a standing item of ENFO since 1993. Since 1994 annual invitations have been issued to Thailand and Malaysia on the basis that they are not salmon producers but they may be involved in the salmon trade. They have been invited not only to attend as observers but also to provide information on their measures to curtail possible illegal trade. Indonesia was added to the list of invitees in 1996. None of these invitations has ever been accepted. China and

the Republic of Korea have also received invitations to attend as observers since 1994. Repeated invitations and démarches from the NPAFC to China as well as high and low level bilateral approaches by the Parties have been unsuccessful. However, Korea acceded to the Convention in 2003. In 2004 an invitation was extended to Taiwan which has attended as an observer since 2005, submitting regular reports summarising its enforcement efforts to ENFO. In 2009 Taiwan has also provided NPAFC with information on its patrol plans in advance of the season.

The inability to attract China into the Commission, particularly given the prevalence of Chinese driftnet vessels fishing in the Convention Area has been a source of considerable frustration within the Commission. China's intransigence appears to relate to a bilateral issue over its position (or not, as the case may be) as a state of origin. The potentially negative effect of its absence is somewhat ameliorated by the existence of the bilateral US-China Shiprider Agreement, pursuant to which many Chinese driftnet vessels have been interdicted and returned to China for prosecution.

However, the situation with China highlights a structural impediment in the Convention. Pursuant to Article VIII decisions on matters of substance may only be taken by states of origin, who are themselves able to determine what constitutes a matter of substance. Since the Commission has no stock management or catch allocation mandate there appears to be no benefit whatsoever to any non-origin state (or other entity) joining the Commission and expending the necessary resources on attendance at Commission meetings and participation in Commission science and enforcement activities.

In 1994 Canada proposed development of a protocol to deal with non-contracting parties. Although Japan and Russia did not support the proposal it was agreed to establish a working group to examine means by which non-contracting parties could formally support the objectives of the Convention, for example, through a two tier membership scheme or exemption from financial obligations. In subsequent discussions the parties decided that the FAO Compliance Agreement could serve this purpose and the matter appears to have been dropped. The issue of cooperating non-party, or cooperating non-member (CNM), status was raised again in ENFO in 2009 but was not resolved.

Review Panel comment:

- *The Commission must be commended for its concerted efforts to engage with states and entities whose vessels and nationals may be undermining the objectives of the Convention. However, the absence of a membership category for cooperating non-contracting parties/entities seriously undermines its ability to do so as do current voting rules.*

The Review Panel recommends that:

- *the Commission give immediate attention to developing a regime for the granting of CNM status including consideration of the incentives that may be available to encourage other states to participate in the work of the NPAFC.*

3.3 Compliance of the NPAFC to Regional and Global Enforcement Measures

3.3.1 *Contribution of NPAFC to the implementation of UNGA Driftnet Resolutions (TOR-ENFO 7)*

The UNGA Driftnet Moratorium calls upon all states to take measures, collectively and individually, to prevent large scale pelagic driftnet fishing on the high seas. Given the historic link between high seas driftnet fishing and anadromous fish it is hardly surprising that contributing to the implementation of the Moratorium has been a core focus of the NPAFC. Indeed, all enforcement action taken by the Parties has been aimed at stopping HSDN fishing. Actions taken against NCPs are specifically justified by the Parties as being pursuant to the Moratorium. All evidence suggests that the incidence of HSDN fishing has been significantly curtailed in the North Pacific. Although the Parties note that vigilance is still necessary as evidenced by the spike in activity in 2006/2007.

Review Panel comment:

- *The NPAFC has made an unparalleled contribution to the implementation of the UNGA Driftnet resolutions and can only be commended for its actions in this regard. There is danger, however, of confusion of mandates and the NPAFC must remain vigilant to ensure that its enforcement efforts are directed at HSDN fishing for anadromous fish only.*

3.3.2 *Contribution of NPAFC to the implementation of the FAO IPOA-IUU (TOR-ENFO 7)*

The IPOA-IUU is a voluntary non-binding instrument that sets out a range of ‘tools’ that states and RFMOs might adopt to control IUU fishing. RFMOs have a central role to play in addressing IUU fishing which, it must be remembered, can be engaged in by both members and non-members of RFMOs. FAO Technical Guidelines for the Implementation of the IPOA-IUU identify the following steps that RFMOs can take to prevent, deter and eliminate IUU fishing:

- a) collect and disseminate information relating to IUU fishing;
- b) identify vessels that are engaging in IUU fishing and coordinate measures against them;
- c) identify states whose vessels are engaging in IUU fishing and urge identified states to rectify such behavior;
- d) call on their members to take action against vessels without nationality that are fishing in the relevant region;
- e) adopt rules to ensure vessel chartering arrangements do not lead to IUU fishing;
- f) adopt port inspection schemes, restrictions on transshipment at sea and schemes creating a presumption that fish harvested by non-member vessels in the relevant region should not be permitted to be landed in ports of members;
- g) adopt catch certification and/or trade documentation schemes;
- h) adopt other market-related measures to combat IUU fishing.

The NPAFC scores highly on (a) – (c). As a Commission it has done nothing with respect to (e) – (h), although the individual Parties may have appropriate measures in place. With respect to (d), ENFO has discussed the laws in force in each Party with respect to stateless vessels however it has made no recommendations or taken any other action in this regard. Indeed, it is difficult to

see how it might, given the voting procedures which require the affirmative vote of all states of origin on important matters. Since all Parties are states of origin, each Party effectively has a 'veto' over any decision to adopt any substantive recommendation calling on the Parties to take any form of action.

The FAO Guidelines provide further suggestions on what states, acting through RFMOs can do to ensure effective implementation of the IPOA-IUU. Critical among them is the development and coordination of 'real-time' monitoring, control and surveillance regimes. The NPAFC clearly also scores highly in that regard. However, some other suggestions that are relevant to and require attention by the NPAFC include:

- a) ensuring the RFMO has the resources necessary to carry out its assigned functions;
- b) developing ways to facilitate cooperation by non-members, ie, by developing CNM status;
- c) ensuring decisions concerning IUU fishing are made promptly and consistently, ie authorising the Secretariat to send immediate notification to relevant states (as opposed to waiting until the annual meeting);
- d) development of IUU vessel lists and databases of information concerning fishing violations and prosecutions.

Review Panel comment:

- *The unique legal framework in which the NPAFC operates places it in an enviable position of having made a significant contribution to the implementation of the IPOA-IUU through its enforcement activities. Nevertheless, as noted above, areas for ongoing improvement of its contributions exist.*

The Review Panel recommends that:

- *ENFO be tasked with preparing a study on the possible further contribution by the NPAFC to the implementation of the IPOA-IUU.*

Chapter 4

Administrative and Financial Issues

4.0 Introduction

Administrative and financial issues fall under the purview of the Committee on Finance & Administration (F&A) which is established pursuant to Article VIII(8) and Rules of Procedure 9. The committee consists of one Representative and advisors from each Party. Its functions are to investigate, report on, and make recommendations in respect of matters of finance, administration, and such other matters as may be referred to it by the Commission. The Terms of Reference for the committee (F&A-TOR) are addressed in Articles VIII, X and XI of the Convention, the Rules of Procedure (RoP) and the Financial Rules (FR).

4.1 Administration

4.1.1 *Implementation of the Rules of Procedure*

4.1.1.1 Commission and committee membership changes

Article VIII(7) provides that each Party is entitled to appoint up to three ‘representatives’ to the Commission. In the preamble to the RoP ‘Representative’ is capitalised and these Representatives are referred to colloquially within the NPAFC as ‘Commissioners’. RoP 1 requires the Parties to inform the Commission promptly of any changes in their Representatives and permits the designation of alternative Representatives to serve at meetings in the absence of the appointed Representatives. RoP 2 requires designation of primary points of contact for intersessional correspondence. RoPs 9-11 require one Representative from each Party to participate in each of the CSRS, ENFO and F&A.

Notifications of changes to appointed Representatives and points of contact are regularly provided to the Secretariat as recorded in its annual Administrative Reports. Each of the Parties has appointed Representatives, although over the history of the NPAFC not all parties have appointed their full complement of three Representatives at all times. In addition, the ability to designate alternates is frequently utilised by the Parties with appointed Representatives often being replaced at Commission meetings by alternates.

Actual delegations to Annual meetings are often comprised of only two Representatives or their designated alternates (plus experts and advisors). As a result, the requirement that one Representative for each party participate in the CSRS, ENFO and F&A committees is often not met, particularly when the committees meet concurrently as is the practice with ENFO and CSRS. While Representatives generally attend F&A meetings, in practice the Parties are often represented at ENFO and CSRS meetings by other experts or advisors selected from their delegations. This represents a technical breach of the RoP. In addition, this has implications for

the voting procedures which, pursuant to RoP 7 require that votes both in the Commission and in its committees be cast by any one Representative from each Party.

Review Panel comments:

- *The flexibility in these Rules appears to serve the Commission well, although there is concern in some quarters that this flexibility masks a lack of commitment to the Commission.*
- *The presence or absence of capitalisation in the word Representative (as opposed to ‘representative’) is confusing and may lead to interpretative difficulties relating to voting procedures.*

The Review Panel recommends that:

- *the Commission consider amending the terminology used in the RoP to refer to ‘Representatives’ as ‘Commissioners’ or to otherwise clarify RoP 9-11 to bring them into line with current practice.*

4.1.1.2 Commission officers

The Commission follows a principle of rotation among the Parties in electing its officers and the chairpersons of its committees (RoP 14 and 15). This is an effective tool for ensuring a fair and predictable distribution of representation and responsibility given the limited membership of the Commission. On occasion, Commission officers have been unable to attend the Annual meeting due to conflicting obligations. Similarly, committee chairs are sometimes replaced at annual meetings by alternates. This is envisaged in RoP 16 which provides for the filling of casual vacancies by a ‘representative’ to be selected by the same Party as the former occupant of the office, subject to the approval of the Commission. It is interesting to note the use of the uncapitalised ‘r’ in this Rule which seems to be deliberate as there is no requirement that the chairs of the various committees be filled by Representatives; only that one Representative from each Party shall be on the committee.

Review Panel comment:

- *There is a risk that the efficacy, certainty and continuity provided by these mechanisms may be compromised by the absence of Commission Officers or the excessive delegation of alternates. This may contribute to the appearance of complacency or lack of commitment to the Commission.*

The Review Panel recommends that:

- *while absences are to be expected given the exigencies of crowded governmental and international agenda and the shifting vicissitudes of busy professional lives, in the interests of the efficient execution of the Commission’s mandate the Parties should, as far as possible, ensure that persons appointed as officers of the Commission or as Representatives are able to fulfill the responsibilities incumbent on them for the duration of their terms.*

4.1.1.3 Commission meetings

The business of the Commission and its committees is conducted at its annual meetings. Since its inaugural meeting in 1993, annual meetings of the Commission, as required by Article VIII(12)

and RoP 3, have been held in the member states on a rotating basis over a period of five days late in the calendar year (late October or November). Regular interim meetings include, since 1995, the annual Research Planning and Coordination Meetings (RPCM) and, since 2000, the annual Enforcement Evaluation and Coordination Meetings (EECM). In addition, since 1996 the Commission has also convened 14 ad-hoc scientific and enforcement symposia and workshops (see Tables 2.3 and section 3.2.1)

Although not provided for in the RoP, Heads of Delegation (HOD) meetings are also called to discuss issues relating, *inter alia*, to the accession of new Parties to the Convention and the level of contributions, and performance of the Executive Director (Staff Rule 22). Since 2006 HOD meetings have been an increasingly regular component the Annual Meetings with a growing list of issues being referred to them by the Plenary and the committees.

The Annual meeting, RPCM and EECM are held independently of each other. The practice has developed of holding both the RPCM and the EECM in the spring (April/May) to enable the Parties to plan and coordinate their research and enforcement activities for the coming summer season. These activities are then reviewed by the CSRS and ENFO at the Annual Meeting. Simultaneous interpretation is provided for all Annual meetings, RPCM and EECM. The official languages of the Commission are English, Japanese and Russian (Article VIII). Since Korea's accession, interpretation has also been provided in Korean.

Review Panel comments:

- *Decisions on substantive matters of import are increasingly being made within the HOD for mere report back to the relevant committee or the Plenary. This has implications both for transparency and for the locus of the decision making power in the Commission. In addition, it has implications for the conduct of committee meetings which either cannot proceed until the HOD have met or cannot proceed because a committee member is absent due to attendance at the HOD meeting.*
- *The practice of the Parties to date in providing interpretation of all languages represented in the Commission begs the question as to whether interpretation in other languages would also be provided should other states join the Commission.*

The Review Panel recommends that:

- *the Commission consider regularising the scheduling of HOD meetings into the agenda to avoid scheduling conflicts and delays to the work of the Commission during its Annual meetings;*
- *the Commission develop a policy on the provision of interpretation at its meetings for new member states and any possible future cooperating non-contracting parties.*

4.1.1.4 Voting procedures

Article VIII(10) provides that decisions on all matters considered important by any Party who is a state of origin are to be taken by consensus among all Parties who are states of origin. All other matters are to be decided by simple majority. The current Parties are all considered states of origin. Voting procedures for meetings, as well as postal and other voting procedures are set out in RoP 6. In practice all Commission decisions have been taken by consensus in recent history

with the postal and other voting procedures providing a flexible and apparently effective mechanism for dealing with issues inter-sessionally.

Review Panel comments:

- *The voting procedures appear to serve the Parties well. However, the Review Panel notes that Article VIII(10) appears to present a deterrent to non-contracting parties which are not states of origin joining the Commission. This may, at least in part, explain the Commission's lack of success in engaging other states in its activities.*

4.1.1.5 Observers

Admission of observers is dealt with in RoP 5 which was amended in 2006 to allow the Commission to decide, by consensus, to invite observers to any Commission meetings. The Commission has consistently extended invitations to a number of states and entities, including People's Republic of China, Malaysia, Thailand and Taiwan and up to twelve intergovernmental organisations, including NASCO, PICES and, since 2007, the WCPFC. Taiwan has attended Annual Meetings as an observer since 2005 while PICES and NASCO also regularly attend. RoP 5(a) requires any other organisation wishing to participate as an observer in Commission meetings to provide 120 days notice, with Parties being obliged to make a decision on the application by consensus at least 60 days before the Annual Meeting. This provision is rarely invoked. While that might be a result of limited interest in the Commission's mandate, a relaxation of the notice requirement may provide greater flexibility thereby promoting greater interest in the Commission's work.

Review Panel comments

- *It is unclear from ROP 5a whether observers may apply to observe any meeting of the Commission or just the Annual meeting. The 120 day notification requirement also seems somewhat excessive, particularly given that the Commission does not deal with controversial management issues and it seeks greater publicity. Consideration might also be given to the creation of different categories of observer in order to distinguish between representatives of official entities like the Pacific Salmon Commission and PICES, who are not only accepted as observers but seated at the main table and given the opportunity to address the plenary sessions, and other individuals or representatives of organisations that simply want to observe committee meetings.*

The Review Panel recommends that:

- *the Commission consider amending RoP 5a to reduce the notice period required for the seating of observers and consider other ways in which to make the Commission more open to individuals or representatives of other organisations.*

4.1.1.6 Role of the Executive Director

The Executive Director is appointed by the Commission to oversee the work of the Secretariat. The Executive Director's conditions of work are determined by the Commission (Article X) in accordance with the RoP and the Staff Rules (SR). RoP 19 sets out the powers and duties of the Executive Director. Staff Rule 22 provides for the performance appraisal of the Executive

Director to be completed by the President of the Commission ‘in consultation with the representatives of the Contracting Parties’. Unlike in the case of RoP 16, it is unclear whether the use of the lower case is intentional here. In practice, the performance appraisal of the Executive Director has been carried out by the HOD meetings. The Review Panel assumes that the word ‘Representative’ should therefore be capitalised.

The incumbent Executive Director provides annual written reports on the Commission’s activities and the Secretariats’ performance. General satisfaction with the current Executive Director’s performance in fulfilling his obligations under RoP 19 can be implied from the fact that his contract has been twice renewed and once extended by the Parties so that an original 4 year term starting on 1 April 1999 will now terminate on 30 June 2013.

The performance of the Executive Director and the Secretariat is addressed in more detail in Section 4.1.3 below. However, the Review Panel considers it relevant to address here the issue of the interpretation and implementation of RoP 19(a). Rule 19(a) provides that the Executive Director ‘shall have the power to appoint staff to positions established by the Commission subject to the guidelines and budgets established by the Commission’. Staff Rule 14 provides that the Executive Director ‘shall, after informing the Commission of a vacancy, appoint staff to the Secretariat in accordance with staffing requirements approved by the Commission. The Deputy Director shall be approved by the Commission’. Acrimonious discussions have taken place within the Commission as to the interpretation and application of these provisions, with some Parties suggesting that these rules improperly give the power to the Executive Director to appoint the Deputy Director. The first hiring procedures for the Deputy Director were drafted by the Commission in 1993. It was agreed at that time that the Executive Director ‘would transmit to each Party a list of all applications received, a copy of all qualified applications and submit a name of the final candidate with explanation of his/her selection for the Commission’s approval’. The same requirement has been included in every subsequent procedure for the hiring of the Deputy Director. In practice, applications have been made available to the Parties, the Executive Director has taken responsibility for interviewing candidates and has submitted his final selection to the Commission as required.

Review Panel comments:

- *The absence of capitalization in the word ‘representative’ in Staff Rule 22 should be clarified.*
- *In 2005 the HOD agreed ‘to establish a Review Committee at an appropriate time to consider the goals for the position of Executive Director and oversee the process for the hiring of a new Executive Director’. There is no record of any such committee having yet been established. Plans for the hiring of a new Executive Director need to be made in the immediate future.*
- *Textualist, intentionist and teleological approaches to interpretation all lead to the conclusion that the final decision as to the hiring of the Deputy Director rests with the Commission which is at liberty to reject the Executive Director’s selection. It is true that the Deputy Director is required to stand in for the Executive Director in the exceptional circumstance that the latter is unable to act or the position of Executive Director is vacant (RoP 21). However, it is also true that the Executive Director and the Deputy Director must be able to work together as colleagues on a daily basis. The current procedure appears to represent an appropriate balance between the interests of the Parties and the needs of the*

Secretariat. The application of any other interpretation or procedure will require an amendment to the relevant rules.

The Review Panel recommends that that:

- *consideration be given to clarifying the use of an uncapitalised ‘r’ in Staff Rule 22;*
- *a committee be established to undertake ‘succession planning’ through a review of the goals for the position of Executive Director and to oversee the process for the hiring of a new Executive Director;*
- *the Commission turn its mind to a definitive clarification of RoP 19(a) and the hiring process for the Deputy Director.*

4.1.2 Effectiveness of publications and publicity

4.1.2.1 Publications

The Commission is required to publish an Annual Report and a Statistical Yearbook and may publish such other reports as it deems desirable (RoP 25). There is some confusion as to the meaning of the term ‘publish’, ie whether this requires the production of physical paper bound volumes or whether it includes electronic publication. In the current electronic age the Review Panel considers it appropriate to take the broader approach to the concept of publication as including both print and electronic mediums.

The Annual Report consists of a report on the Commission’s operations, investigations and findings (RoP 17(f)). It contains the minutes of the interim and annual meetings and relevant appendices. The Statistical Yearbook contains catch information on harvesting of anadromous stocks in the Convention Area and in waters under national jurisdiction and on harvesting of ecologically related species specified by the Commission (RoP 19(k)). In addition, the Commission publishes the Minutes of the Annual Meetings, an *ad hoc* series of Scientific Bulletins and Technical Reports, an annual Newsletter, as well as its Handbook and occasional publications such as the 10th Anniversary Commemorative Album. The Commission is also the repository of the documents of its predecessor, the INPFC, which are housed at the Secretariat.

The Commission has done an effective job in producing the necessary publications and has embraced new publication media in order to reduce costs and continue publishing within serious budgetary constraints. In the early years, the Annual Reports were published in the three working languages of the Commission. To reduce costs, since 2002 the Annual Report has been published in English only. In addition, it has been published only in CD-Rom format to save printing costs. The Statistical Yearbook is, since 2004, also published in CD-Rom format only. The efficacy of these publications is therefore somewhat restricted by their availability to English speakers and computer users. Moreover, the Review Panel notes the recurring delays encountered by the Secretariat in obtaining statistical information from the Parties to enable the prompt production of the Statistical Yearbook which is currently up to date only to the end of 2007.

The NPAFC Newsletter has been published semi-annually since 1997. Again, due to budgetary constraints, as from 2010 the print version of the Newsletter has been discontinued and it will be available in electronic format only. The Newsletter represents a useful and effective summary of

Commission activities and matters of interest to the broader community. Increasingly, the Newsletter contains a range of 'current interest' articles relating primarily to activities in areas under national jurisdiction. While it seems appropriate for the NPAFC to carry the banner of salmon conservation in the member states to a broader public there is a danger of confusion with respect to the mandate and jurisdiction of the Commission. Nevertheless, the Newsletter is a very useful vehicle for highlighting the role of the Commission in the coordination of science and enforcement in areas beyond national jurisdiction which may also be relevant to activities in areas under national jurisdiction.

The Commission has had an internet presence since 1997, with the website having undergone two renovations since its unveiling. The website is a useful and potentially powerful means of both publication and publicity for the Commission. However, the Review Panel believes the functionality of the current web format could be greatly enhanced. For example, the efficacy of the Statistical Yearbook could be enhanced if it was made available in a searchable format. In addition, while Annual Reports for the years 1993-2001 are presented as pdf versions of text documents, Annual Reports for the years 2002 and beyond are presented in html format, reflecting the CD-Rom format. The information presented is handsomely supplemented by the extensive use of images and graphics. However, accessing and printing the Annual Report either in whole or in part is extremely cumbersome and time consuming. In the opinion of the Review Panel it may be more effective to present the minutes of the various interim meetings as well as the Minutes of the Annual Meetings (including the full list of documents and the decisions and recommendations adopted by the Commission) as searchable, downloadable and easily printable pdf documents, each allocated to their respective 'tab' on the webpage and easily linked by the greater use of hypertext links. It is notable that neither a complete list of NPAFC documents nor a record of the decisions and recommendations adopted by the Commission is available anywhere on the website.

Review Panel comments:

- *The readiness of the Commission to embrace electronic and on-line publication of Commission publications must be commended although the Review Panel notes the need to continue producing hard copies of official Commission publications, the Annual Report and the Statistical Yearbook for archival purposes. Minutes of the Annual and other meetings could be produced as pdf documents for distribution to the parties and the public electronically and then consolidated in print form in a limited run of the Annual Report (which is then also available as a pdf online). Consideration could also be given to altering the content of the Annual Report to provide a true 'summary' of the Commission's activities, decisions and recommendations rather than a mere duplication of the minutes of the various meetings. Electronic publication of the Newsletter is entirely appropriate to its purpose and audience.*
- *Given the increased recourse to electronic and publication and website design the Commission needs to consider increasing the IT capability in the Secretariat.*
- *The Parties need to ensure prompt provision of data for the Statistical Yearbook. The Secretariat should not be required to make repeated calls for its provision.*
- *The Commission is the repository of the records of its predecessor, the INPFC. INPFC documents are currently only available upon request to the Secretariat which must physically copy them and send them out. These documents should be scanned and made available*

online. Arrangements can then be made with an institution, such as a University Library, for the archiving of all INPFC documents, thereby freeing up physical storage space in the Secretariat offices.

The Review Panel recommends that:

- *the Commission establish a publications committee to review the efficacy and format of Commission publications and the website in order to fully consolidate the gains to be achieved by the increasing use of electronic and online publishing possibilities;*
- *the reports of the INPFC be scanned and made available online and that the hard copies be archived with a suitable library which is able to ensure their permanent availability to future researchers;*
- *consideration be given to increasing the IT capacity, both in terms of physical hardware and in terms of personnel, within the Secretariat.*

4.1.2.2 Publicity

The Commission has adopted Guidelines for the Media and issues a news release after its Annual meetings. There appears to have been limited media interest in the work of the Commission to date. The possibility of a commercially produced promotional video relating to the enforcement activities of the Commission is currently under discussion in ENFO as a means of stimulating broader media interest in and public awareness. The Review Panel notes that the Commission may be a victim of its own success, having effectively stopped high seas fishing for salmon and most high seas driftnet fishing. This begs the question as to what the purpose of any increased publicity might be. If publicity is considered important, the Commission could encourage greater media contact in order to draw more attention to its activities and achievements. However, any media strategy should consider all of the activities and achievements of the Commission, not just those in the enforcement field.

Review Panel comment:

- *The Commission needs to carefully articulate its publicity needs and goals.*

The Review Panel recommends that:

- *professional assistance should be engaged to properly address the issue of publicity for the Commission and to ensure maximum public relations gains.*

4.1.3 Management and efficiency of the Secretariat

The administration of the NPAFC is managed through the Secretariat which is located in Vancouver. The Commission appoints the Executive Director to oversee the work of the Secretariat which is charged, in Article X, with providing administrative services to the Commission, compiling and disseminating statistics and reports concerning anadromous stocks relevant to the Convention and ecologically related species, and performing such other functions as follow from the Convention or as determined by the Commission. The powers and responsibilities of the Executive Director are set out in RoP 19. The Executive Director is supported by a Deputy Director, an Administrative Officer and a Secretary. Detailed job

descriptions and Staff Rules have been adopted by the Commission and these rules have been amended from time to time.

The Executive Director reports annually to the Commission on the work carried out by the Secretariat, including the implementation of the decisions and recommendations adopted by the Commission. These reports indicate that the Secretariat has been tasked with an increasing range of responsibilities as the number of interim meetings, seminars, workshops, and Commission coordinated scientific research projects has grown. Comments received from the Parties confirm that the Commission has been well served by a professional Secretariat which has fulfilled its obligations efficiently and economically. Particular comment has been made of the benefit to the Commission of its diligent, loyal and long-serving Canadian local staff. Large projects, however, such as the tagging database or the IIS have not been centralised in the Secretariat due, at least in part, to lack of resources and suitably qualified personnel.

Review Panel comment:

- *The Secretariat manages an increasing number of Commission activities, however, its capacity to take on larger and more strategic projects is limited by financial and personnel restrictions. In this respect the Secretariat is to be commended for having taken the initiative to establish an internship program. Interns may provide cost effective assistance in administrative matters and, particularly, in undertaking strategic projects such as the scanning/digitizing of the INPFC documents for uploading to the Commission website.*

The Review Panel recommends that:

- *The Parties consider increasing administrative support within the Secretariat to meet the increasing demands being made on Secretariat staff and to ensure the Secretariat's ability to carry out strategic projects of importance to the Commission.*

4.2 Finance

4.2.1 Implementation of the Financial Rules

The Commission's Financial Rules are adopted pursuant to Article VIII(16). The Commission is funded by equal contributions from the Parties. The Commission has benefited from the transfer to its reserves of the remaining financial reserves of its predecessor the INPFC. These reserves, together with levies in lieu of taxes and unused appropriations have allowed the Commission to grow. However, budgetary pressures have meant that contribution levels have had to increase twice, with the most recent increase to take effect from 2010.

The Executive Director prepares the annual budget and forecast estimates which are approved by the Commission annually. From these documents it is clear that the largest expenses for the Commission relate to the salaries of Secretariat staff and interpretation/translation services. With respect to salaries, FR 23 provides that staff salaries shall be reviewed annually by the Commission and adjusted when deemed appropriate. Over the years there has been considerable difficulty in interpreting the application of the rules relating to the use of Canadian Public Service

analogues in determining salary levels, resulting in acrimonious debates that are both time consuming for the Commission and demoralizing for the Secretariat staff.

With respect to interpretation/translation services, as from 2002 the Commission ceased translating its Annual reports into Japanese and Russian. Since then, due to budgetary constraints, it has been suggested to further reduce interpretation costs by ceasing to service the interim meetings. This suggestion has met with opposition and a counter-proposal suggesting the termination of the interim meetings on the basis that their work substantially duplicates work being carried out in other fora such as PICES and the NPCGF. A further proposal calls for the rescheduling of the Annual meeting to run concurrently with the interim meetings.

Over the years a number of different funds have been established to receive voluntary and/or external contributions for financing Commission activities. Guidelines have been established for the allocation and distribution of these funds. In 2006 the Commission adopted a policy for the acceptance of external funds for scientific research whereby the Secretariat, in collaboration with F&A actively engages in the pursuit of external funding.

Review Panel comments:

- *In general the Financial Rules have been well implemented and have served the Commission well although there appears to be some propensity for the Commission, through the F&A, to micromanage the Secretariat. For example, the issue of payment of overtime of Secretariat staff is frequently raised by the Parties, despite the clear rules on its payment set out in the Staff Rules. Issues relating to the identification and location of certain items in the budget (such as debates over what is or is not appropriately included under the 'Moving Expenses' category in the Working Capital Fund) are also regularly raised. While these issues are appropriate ones for scrutiny, the apparent degree of antagonism in these enquiries is perceived as unhelpful.*
- *Debates and continuing uncertainties over salaries have affected all Secretariat staff. However, this appears to have been a particular issue with respect to the Executive Director's salary. With the impending retirement of the current Executive Director in 2013, consideration could be given to fixing the terms of the contract with the next Executive Director so that it provides clear guidance on salary and benefits over the course of the contract with a view to avoiding the same issues being raised on an annual basis.*
- *The Parties need to agree on a sustainable approach to both the holding of Commission meetings and to the provision of interpretation services at those meetings for the immediate and the mid to long term future. Resolution of this issue will be an important indicator of the Parties' commitment to the Commission and its work.*

The Review Panel recommends that:

- *The F&A establish a working group to develop clear contractual terms on salary and benefits for the next Executive Director;*
- *The F&A establish a working group to examine the mid to long term translation and interpretation needs of the Commission and the financial implications thereof.*

4.2.2 Effectiveness of financial management

A review of auditor's reports indicates that the finances of the Commission have been well-managed. Indeed, the Secretariat should be commended for its frugality and its continuing efforts to maximise the use of Commission funds and its involvement in seeking additional sources of funding for Commission activities. However, recurrent financial constraints will continue to place increasing strains on the ability of the Commission to conduct its activities and meet its obligations. The Commission is increasingly becoming involved in funding the activities of individuals and entities within the member states, for example through funding research training and exchanges and the supply of software and other equipment for enforcement purposes. The extent to which these activities properly fall within the obligations of the Commission as set out in the Convention is unclear.

Review Panel comments:

- *The debates currently taking place with respect to the issue of interpretation and budgetary constraints appear to mask a deeper issue which is the depth of commitment of the Parties to the achievement of the objectives of the Convention. The Commission appears to be at something of a cross road. The Review Panel believes that this may be an opportune time for the Commission to establish a working group to consider the future of the NPAFC with a view to clearly articulating its objectives and goals for the future.*

The Review Panel recommends that:

- *the Commission consider the establishment of a working group to consider its future and clearly articulate its objectives and goals for the future. In doing so, the Parties should consider prioritizing current and future expenditures to focus on core Commission activities, rather than curtailing those core activities.*

4.2.3 Auditing procedures

Financial Rules 32-34 require the annual statements and accounting records of the Commission to be externally audited annually. The Commission has engaged the services of professional auditors who appear to be both effective and economical. The practice of changing auditors to ensure the continued quality and cost effectiveness of the audits is to be commended.

Chapter 5

Conclusions and Recommendations

5.0 Introduction

This chapter provides a summary of the overall conclusions and recommendations of the Review Panel followed by a consolidated list of the Review Panel's recommendations in the order they appear in the report. The recommendations have generally been copied as they appear in the main text with some editorial modification, where necessary, to provide context.

Overall, the NPAFC has been a success in meeting its original objectives. Soon after the Convention was adopted directed and indirect high seas fishing for anadromous stocks by the Parties was virtually eliminated. Since then, by its own admission, the Commission has also largely succeeded in eliminating HSDN fishing by NCPs which directly or indirectly target anadromous fish. The Commission has also succeeded in achieving and maintaining an extremely high degree of collegiality, characterised by its cooperative nature and the importance of social interaction within the committees. It is in these enviable successes, however, that the challenges lie for the Commission in finding a continuing role for itself and ensuring that its remarkable degree of collegiality does not merely mask a degree of lack of commitment to the Commission.

5.1 General Findings and Recommendations from the Review of the CSRS

5.1.1 *The overall picture*

The CSRS conducts its business well and delivers a very high level of science. It promotes strong collaborations among the Parties and in particular among the individual participants of CSRS activities. The work is done largely in a collegial and consensus manner and there is a clear focus on important scientific issues relating to anadromous fish stocks in the North Pacific. The Review Panel has found that the CSRS generally meets or exceeds most of its Terms of Reference.

5.1.2 *The focus for scientific research in the NPAFC*

The original purpose of the NPAFC was to support conservation of anadromous fish stocks in the Convention Area, by prohibiting their directed and incidental taking and by providing scientific advice to promote their conservation in the Convention Area for the purpose of maximizing returns into national waters. Given the absence of any role for the NPAFC in setting or managing stock-specific catch allocations, several initially important CSRS Terms of Reference, such as the requirement to make recommendations to the Commission for the conservation in the Convention Area of anadromous stocks have declined in importance. The CSRS has therefore developed a broader focus on the leading scientific questions relating to anadromous stocks in the Convention Area, such as productivity regimes, climate change, and general gaps in understanding of salmonid biology and ecology in significant geographic regions (e.g. the Bering Sea), and significant seasons (e.g. winter). This focus has extended to scientific issues relating to the

growth and survival of anadromous stocks in national waters, recognising that these processes set the stage for how many salmon reach the Convention Area, and in what condition, and vice versa. However, the Commission has been careful not to exceed its mandate by making recommendations on management of anadromous stocks in national waters.

5.1.3 *Ecologically-related species*

The Commission has not designated ‘ecologically-related species’, preferring instead to leave it to individual Parties and individual research projects to define them as appropriate for the particular objectives at the time. This has led to inconsistencies as to which species to report in the annual statistical tables of catch, with some parties providing information on catches of other pelagic and groundfish species for some years, but not others.

This also leads to confusion in interactions with PICES, which *could* be requested to provide information and updates on this broad range of species (and ocean conditions) to the Commission, although this does not appear to have been done other than in the context of presentations at jointly sponsored symposia and workshops. While the NPAFC has provided PICES with specific analyses of salmonids in the North Pacific for the PICES ecosystem status reports, PICES has not been asked to provide similar synopses of ‘ecologically-related species’ to NPAFC, but it could be asked to provide such information. NPAFC would need to be clear as to what questions and information it could or should request from PICES.

This issue is also relevant to embracing the ecosystem-based approach to the study and management of marine systems which RFMO’s are increasingly being encouraged to adopt. An ecosystem-based approach underlies the BASIS program, but it could perhaps be placed more extensively into the broader marine ecosystem of the Bering Sea.

5.1.4 *Research Planning and Coordinating Meetings*

These interim meetings appear to be useful, in particular with respect to confirming survey plans, personnel exchanges, and for reviewing selected topics. However, the participation at these RPCM appears to be somewhat sporadic, for example with few members of CSRS Working Groups able to attend. Translation costs for these meetings are also very expensive for the Commission. If the prime motivation for having these in the spring is because that is when survey schedules and ship time allocations are confirmed, then the Commission should consider moving the Annual Meetings from fall to spring to save costs. Alternatively, issues of vessel coordination and personnel participation for the year could be conducted by Email, perhaps coordinated through the Secretariat.

5.1.5 *Functions of the CSRS*

In terms of technical issues of how the CSRS functions, it is unclear why, after 18 years, the CSRS Terms of Reference are still referred to as ‘Interim’. These should be re-visited and, if necessary, updated to reflect current practice and issues, and future directions. The Committee could be more fully integrated into the daily activities of the Commission. The CSRS should embrace and adopt a formal role of providing scientific information and, where appropriate,

advice to ENFO to assist with enforcement operations. The CSRS should also produce unsolicited advice regarding the status of anadromous stocks in the North Pacific, to provide context to issues that may be occurring with stocks in national waters. Such advice could also include large-scale stressors such as climate change, on which the Commission has been active and is producing important results although to date these seem mostly to have been presented in the scientific literature which may by-pass decision-makers. The Committee, perhaps through the Secretariat, should consider assuming a more direct role in managing and maintaining the several databases that are being developed through CSRS activities.

5.1.6 “Vision” for the CSRS

The Review Panel recommends that CSRS conduct a “visioning” exercise to discuss and plan for its future roles, from which would come a clear statement of the vision or goals of the CSRS. Such exercises sometimes take the form of examining the Strengths, Weaknesses, Opportunities and Threats (SWOT) for the Committee. The Review Panel noted the excellent work done by the Committee on the plan for long-term research and monitoring for Pacific salmon in the North Pacific. This is an important start on the process of identifying a vision for the CSRS, although the process needs to go further and look at both the goals for the Committee and how it functions.

5.2 General Findings and Recommendations from the Review of ENFO

5.2.1 The overall picture

ENFO conducts its business efficiently, effectively and in a collegial manner. It has developed mechanisms for operational cooperation amongst the Parties which ensure effective high seas enforcement activities that would be the envy of any RFMO. The Review Panel has found that ENFO generally meets its Terms of Reference as they are interpreted and applied as relevant to current enforcement needs in the Convention Area.

5.2.2 The focus for enforcement in the NPAFC

The original purpose of the Convention was to prohibit directed and incidental fishing for anadromous fishing by the Parties in the Convention Area and to control illegal trafficking in illegally caught fish. A range of enforcement and enforcement related actions were envisaged including reciprocal at-sea enforcement and the introduction of trade related measures. With the general success of the Convention in ending high seas salmon fishing by the Parties and the apparent decline in illegal trafficking of salmon several potential enforcement mechanisms, such as the development of a Certificate of Origin Program, have fallen from the agenda. Attention has focused instead, exclusively, on at-sea enforcement. With the adoption of the HSDN Moratorium the Parties have significantly expanded their at-sea enforcement activities to encompass actions against NCPs as well. In doing so, however, a certain degree of confusion exists as to whether enforcement actions relate to the Convention or the Moratorium. This is increasingly important given that driftnet fishers are increasingly targeting other species such as tuna. While the Commission can rightly take credit for its role in assisting to enforce the Moratorium it is important that the Commission not exceed its mandate, which relates only to anadromous fish.

5.2.3 Enforcement and Evaluation Coordination Meetings

These interim meetings appear to be extremely useful in providing a framework for inter-agency coordination of annual enforcement operations *inter partes*. The main participants are national enforcement agency personnel and the focus is on operational planning. However, these meetings duplicate inter-agency operational planning activities that are carried out in other fora including annual bilateral planning meetings between the United States and Canada and the North Pacific Coast Guard Forum. In addition, the agenda for these meetings often runs beyond operational planning to reviewing past operations and enforcement outcomes as well as discussing broader issues which are duplicated in discussions in annual ENFO meetings. Interpretation costs for these meetings are expensive for the Commission. The rationale for having these meetings in the spring is to ensure effective pre-season planning when availability of enforcement assets is known. It is debatable whether this level of operational planning falls within the ENFO mandate which could potentially be satisfied by establishment of a report-back system from NPCGF meetings. Assuming, however, these meetings are considered essential then, given the duplication of personnel and agendas between EECM and ENFO, the Commission should consider moving the Annual Meeting from fall to spring to save costs.

5.2.4 Functions of ENFO

ENFO has moved beyond its Terms of Reference which do not appear to provide the jurisdictional basis for the extensive inter-agency cooperation that has become the main focus of ENFO and its EECM. Possible enforcement related actions that were foreseen when the Convention was adopted have not been followed up on and, while emerging issues are routinely raised in ENFO, it does not make substantive recommendations to the Commission. Rather, it essentially provides a forum for discussion, cooperation and building trust and confidence between the national enforcement agencies. It does this well, however, the Review Panel notes the uneven commitment to ENFOs work amongst the Parties.

5.2.5 “Vision” for ENFO

The Review Panel recommends that ENFO conduct a review of its mandate to assess the value of its extensive operational involvement and to clearly articulate its needs and its role in enforcing the Convention (as opposed to the Moratorium). ENFO-TOR should be reviewed with decisions articulated as to why measures are or are no longer considered relevant. Consideration should be given to the relationship between ENFO and the NPCGF and to the role and relationship of the IIS to and within the Commission.

5.3 General Findings and Recommendations from the Review of the F&A

The Commission is well managed although there are financial tensions which run the risk of sidetracking numerous opportunities for improving both the delivery and knowledge of its work. The Commission funds a number of projects and activities, including purchasing equipment or paying travelling expenses for individuals participating in cooperative research projects, the rationale for which is not entirely clear as being consistent with its mandate. Of course it is open to the parties to decide what they want to spend their contributions on. However, the Review

Panel believes the Parties need to consider prioritising expenditures to focus on core Commission activities, rather than curtailing those core activities. The F&A should establish publications and database sub-committees to explore the modern publishing and database management opportunities available to it and ensure that the Secretariat is appropriately funded and staffed to make full use of these opportunities.

5.4 Consolidated List of the Review Panel's Recommendations

1. Activities of CSRS Working Groups should be included and integrated into 5-yr (and longer-term) research plans of the Commission.
2. Data in the Statistical Yearbook should be made available in true electronic formats.
3. Reporting of non-anadromous species in the Statistical Yearbook should be discontinued.
4. The Commission should examine whether an observer program for fisheries which take salmon incidentally is needed.
5. Periodic comprehensive overviews and reports of North Pacific salmonid stock status should be continued.
6. The Commission should re-visit and re-assess the CSRS Terms of Reference and the need for the current Working Groups. How do they fit in with the future vision for NPAFC-coordinated research?
7. The Commission should re-assess requirements, resources, and commitments to the multiple databases established by the CSRS Working Groups. Consideration should be given to direct support and housing by the Secretariat.
8. The Commission should continue to define 'ecologically related species' in vague terms and as needed for specific research projects, but recognise that this is contrary to a Convention Article.
9. The Commission should rely on PICES and other organisations for detailed information on 'ecologically related species', perhaps requesting specific information and syntheses as needed from these organisations.
10. The Commission should consider a program to compare at-sea sampling methods and develop conversion factors or at least clarify their differences, in the context of being able to compare results among member States.
11. The CSRS should track the completion of requests for exchanges of data and samples among member Parties.

12. If Research Planning and Coordinating meetings continue, they should focus on fewer topics in greater detail (selected topics may rotate among years).
13. Specific requests for information and syntheses, for example of 'ecologically related species', should be directed to relevant organisations, such as PICES.
14. CSRS Agenda items should be linked with the appropriate Term(s) of Reference.
15. The CSRS should provide a table of Action Items from each meeting, and track the completion and status of remaining items at the next meeting.
16. The CSRS should seek opportunities to provide advice, both internally and externally, in regards to issues affecting the conservation of anadromous stocks in the Convention Area. In this context, it would be helpful for the CSRS to identify its main "goals" or purposes in relation to the Convention, as a preface to its Terms of Reference (i.e. what is the CSRS trying to accomplish?).
17. The CSRS should be requested to provide advice on issues of the conservation of anadromous stocks in the Convention Area to the Commission, including advice relating to prey and predator species and possible variations due to geographic location and over time.
18. The CSRS should be requested to examine specifically the issue of incidental takes of salmon in the North Pacific to determine if it is an issue, and if so, make recommendations on how these may be mitigated.
19. The terms of reference for the CSRS should be re-evaluated, updated, and formalised.
20. The reporting structure of CSRS Working Groups should be made more explicit and/or the roles of the Science Sub-Committee re-evaluated.
21. The Terms of Reference and objectives for all CSRS Working groups should be made more explicit, as has been done for some but not all CSRS Working Groups (see Table 2.4). This would provide each Working Group with a clear set of goals and a clear standard against which progress towards these goals can be determined.
22. The Commission should give careful consideration to how to better utilise the CSRS to ensure fulfillment of the objectives of the Convention.
23. ENFO should conduct a comprehensive study of the suitability, applicability, rationale for, structure and potential cost of a possible Certificate of Origin Program, particularly with a view to assessing its cost/benefit as against at-sea enforcement operations, in order to ensure the Parties are complying with their obligations under Article III(3).
24. The Commission should encourage the Parties to become parties to the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing,

and ENFO should analyse that applicability of the Agreement to the NPAFC context and provide recommendations to the Commission thereon.

25. ENFO should give priority consideration to the analysis and design of a Cooperating Non-Member status within the NPAFC to accommodate the needs of NCPs and better enable their cooperation with the Commission.
26. ENFO should prepare a study of the measures that have been adopted by the Parties to prevent reflagging for the purpose of avoiding compliance with the Convention and provide recommendations to the Commission on what further (if any) measures the Parties should consider adopting in order to ensure their full compliance with the obligation.
27. All possible avenues should be explored for assisting Korea to comply with its enforcement obligations under the Convention.
28. The status and function of the Enforcement Procedures Working Group should be reviewed and, if appropriate, formalised with dedicated terms of reference and a clear reporting structure.
29. The IIS should be centralised and housed within the Secretariat which should be appropriately resourced to operate, maintain and develop the system. Consideration could be given to reviving the Enforcement Procedures Working Group or establishing a specialised committee to guide further and ongoing development of the IIS.
30. Consideration should be given to the means by which Korea can be integrated into enforcement operations so that it is better able to benefit from and contribute to the information exchanges required by the Convention.
31. The agendas of EECM and ENFO should be reviewed to ensure better rationalisation of activities and resources and to avoid the duplication in discussion and reporting that currently occurs.
32. The ENFO agenda should track completion and outcomes of policy discussions to ensure follow-up at subsequent meetings and meaningful conclusions with respect to the possible adoption of recommended measures to be taken by the Parties.
33. Participation by enforcement personnel in the annual ENFO meetings should be reviewed.
34. ENFO-TOR should be reviewed and updated to better reflect the contemporary enforcement needs of the Commission.
35. The Commission should review the extent of duplication between EECM and NPCGF with a view to carefully articulating its enforcement needs and ensuring compliance with its mandate under the Convention.

36. The Commission should consider the rationale and modus operandi for how best to engage with the new North Pacific RFMO.
37. The Commission should give immediate attention to developing a regime for the granting of CNM status including consideration of the incentives that may be available to encourage other states to participate in the work of the NPAFC.
38. ENFO should be tasked with preparing a study on the possible further contribution of the NPAFC to the implementation of the IPAQ-IUU.
39. The Commission should consider amending the terminology used in the RoP to refer to 'Representatives' as 'Commissioners' or to otherwise clarify RoP 9-11 to bring them into line with current practice.
40. While absences are to be expected given the exigencies of crowded governmental and international agendas and the shifting vicissitudes of busy professional lives, in the interests of the efficient execution of the Commission's mandate the Parties should, as far as possible, ensure that persons appointed as officers of the Commission or as Representatives are able to fulfill the responsibilities incumbent on them for the duration of their terms.
41. The Commission should consider regularising the scheduling of HOD meetings into the agenda to avoid scheduling conflicts and delays to the work of the Commission during its Annual meetings.
42. The Commission should develop a policy on the provision of interpretation at its meetings for new member states and any possible future cooperating non-contracting parties.
43. The Commission should consider amending RoP 5a to reduce the notice period required for the seating of observers and consider other ways in which to make the Commission more open to individuals or representatives of other organisations.
44. Consideration should be given to clarifying the use of an uncapitalised 'r' in Staff Rule 22.
45. A committee or working group should be established to undertake 'succession planning' through a review of the goals for the position of Executive Director and to oversee the process for the hiring of a new Executive Director.
46. The Commission should turn its mind to a definitive clarification of RoP 19(a) and the hiring process for the Deputy Director.
47. The Commission should establish a publications committee to review the efficacy and format of Commission publications and the website in order to fully consolidate the gains to be achieved by the increasing use of electronic and online publishing possibilities.

48. The reports of the INPFC should be scanned and made available online and the hard copies archived with a suitable library which is able to ensure their permanent availability to future researchers.
49. Consideration should be given to increasing the IT capacity, both in terms of physical hardware and in terms of personnel, within the Secretariat.
50. Professional assistance should be engaged to properly address the issue of publicity for the Commission and to ensure maximum public relations gains.
51. The Parties should consider increasing administrative support within the Secretariat to meet the increasing demands being made on Secretariat staff and to ensure the Secretariat's ability to carry out strategic projects of importance to the Commission.
52. The F&A should establish a working group to develop clear contractual terms on salary and benefits for the next Executive Director.
53. The F&A should establish a working group to examine the mid to long term translation and interpretation needs of the Commission and the financial implications thereof.
54. The Commission should consider the establishment of a working group to consider its future and clearly articulate its objectives and goals for the future. In doing so, the Parties should consider prioritizing current and future expenditures to focus on core Commission activities, rather than curtailing those core activities.

APPENDIX I – PERFORMANCE REVIEW CRITERIA

| General Criteria | Detailed Criteria |
|--|---|
| Coordination of scientific research programs | Cooperation in conduct of scientific research in the Convention Area (Article VII.1) |
| | Development of appropriate cooperative programs to collect fishing information in the Convention Area for the purpose of scientific research on anadromous stocks and, as appropriate, ecologically-related species (Article VII.4, TR I-4) |
| | Review of proposed scientific research programs in accordance with Article VII, paragraph 6 of the Convention (TR I-8) |
| Development of anadromous stock identification | Coordination and assessment of scientific studies to ensure the identification of the location of origin of anadromous stocks migrating in the Convention Area and areas adjacent to it (Article IX. 4, 6, & 7, TR I-2) |
| Ecologically-related species | Availability of scientific information and views on ecologically-related species, including the impact of bycatches in related fisheries of species of concern designated by the Commission (Article IX.12, TR I-3) |
| Scientific exchanges | Review and coordination of the collection and exchange of scientific data and collection of specimens of anadromous species (Article VII. 2&3, TR I-1) |
| | Coordination of scientific information exchanges, seminars, workshops, field research, and data analyses (Article VII.5, TR I-5) |

| General Criteria | Detailed Criteria |
|---|---|
| Cooperation with relevant international Organisations | Cooperation, as appropriate, with relevant international Organisations to obtain the best available information, including scientific advice, to further the attainment of the objectives of the Convention (Article IX.9, TR II-1) |
| Review of scientific research results | Review and approval of reports submitted for publication and recommendations regarding other reports to be published (TR I-11). |
| | Submission of the Committee`s annual report to the Commission (TR I-12) |
| Scientific recommendations | Recommendations to the Commission for the conservation in the Convention Area of anadromous stocks and ecologically-related species of concern designated by the Commission (Article IX.1, TR I-6). |

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| | Recommendations to the Commission to avoid or reduce incidental taking of anadromous fish in the Convention Area (Article IX.10, TR I-7). |
| Functions of the CSRS | Review of the existing CSRS structure efficiency (Rules of Procedure 11, TR I-10). |

| General Criteria | Detailed Criteria |
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| Coordination of efforts to prevent unauthorized trafficking in illegally harvested anadromous fish | Nature of measures to prevent trafficking in anadromous fish taken in violation of the prohibitions provided for in the Prevention and to penalize persons involved in such trafficking (Article III). |
| | Draw attention of any State or entity not party to the Convention to matters relating to the fishing activities which could affect adversely the conservation of anadromous stocks within the Convention Area (Article IV). |
| | Nature of measures taken by Parties to prevent transferring vessel registration for the purpose of avoiding compliance with the provisions of the Convention (Article IV). |

| General Criteria | Detailed Criteria |
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| Cooperative mechanisms to detect and deter illegal fishing in the NPAFC Convention Area | Cooperation in taking legal actions against directed fishing for and the minimization of incidental taking of anadromous fish in the Convention Area (Article IV). |
| | Measures taken to ensure that nationals and fishing vessels of the Contracting Parties comply with the provisions of the Convention (Article V). |
| | Cooperation in exchange of enforcement information, including contraventions, disposition of cases and directed or incidental taking of anadromous fish in the Convention Area by national, residents and vessels of any State or entity not party to the Convention (Article VI). |
| | Review and evaluation of enforcement actions taken by the Parties (Article IX). |
| | Cooperation with relevant international organisations (Article IX). |
| | Invitations to States or entities not parties to the Convention to consult and cooperate with the Commission with respect to matters relating to the conservation of anadromous stocks (Article IX). |
| Compliance of the NPAFC to | Contribution of NPAFC to the implementation of UNGA Driftnet Resolutions (TOR-ENFO 7). |

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| Regional and global enforcement measures | Contribution to PNAFC to the implementation of the FAO IPOA-IUU (TOR-ENFO 7). |
| General Criteria | Detailed Criteria |
| Administration | Implementation of the Rules of Procedure. |
| | Effectiveness of publications and publicity. |
| | Management and efficiency of the Secretariat. |
| Finance | Implementation of the Financial rules |
| | Effectiveness of financial management. |
| | Auditing procedures |