

	<p>Council</p> <p><i>Reflections on the Key Messages from the International Year of the Salmon Synthesis Symposium and IYS Legacy Considerations</i></p>	<p>CNL(23)25</p> <p>Agenda Item: 7e)</p>
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***Reflections on the Key Messages from the
International Year of the Salmon Synthesis Symposium
and IYS Legacy Considerations***

Purpose

The purpose of this paper is to provide reflections on the International Year of the Salmon (IYS) as collated during the three-day IYS Synthesis Symposium held from 4 to 6 October 2022, in Vancouver, Canada. An update on the IYS Fund is also provided.

Decisions

- Council may wish to ask the Secretary to transfer the final IYS Fund balance to the ‘Periodic Projects Special Fund’ and close the IYS Fund account once the final amount has been established after the audit of the 2023 accounts.

Background

The International Year of the Salmon (IYS) was an initiative governed by the North Atlantic Salmon Conservation Organization (NASCO) and the North Pacific Anadromous Fish Commission (NPAFC). For NASCO its main year of focus was in 2019 and for the NPAFC it was a five-year (2018–2022) initiative.

It was established under five themes each with their own objectives:

- Status of Salmon;
- Information Systems;
- Salmon in a Changing Salmosphere;
- New Frontiers; and
- Human Dimensions.

The IYS aimed to set the conditions necessary to establish resilience between salmon and people in a rapidly changing world. The culmination of the IYS was marked by a Synthesis Symposium, envisaged in the Terms of Reference for the Symposium Steering Committee, IYS(20)02, as a world-class symposium to report on and synthesise the accomplishments of the IYS and consider its legacy and recommendations for the future. NASCO co-funded the Symposium with the NPAFC at a cost to NASCO of £17,963, leaving a surplus in the IYS Fund (see ‘Budget’ section below).

Here, the NASCO members of the IYS Synthesis Symposium Steering Committee (Livia Goodbrand, Emma Hatfield and Alan Walker) provide their reflections on the conclusions and messages heard during the Synthesis Symposium for consideration by the Council of NASCO.

Key Messages from the Symposium

- broad-scale partnership and collaboration to facilitate scientific research and management approaches are possible, essential and effective;
- Regional Fisheries Management Organizations share a common challenge in responding to climate change and can benefit by co-ordinating their efforts;
- the inability to mobilise data is one of the most significant impediments to salmon science and management;
- Indigenous salmon management systems are under-represented in Regional Fisheries Management Organizations; and
- virtual meeting environments are extremely effective when paired with appropriate in-person opportunities.



The IYS Synthesis Symposium - Salmon in a Rapidly Changing World: Synthesis of the International Year of the Salmon

From 4–6 October 2022, NASCO and the NPAFC held a Synthesis Symposium at the Westin Bayshore Hotel in Vancouver, Canada, to synthesise the knowledge gained over the course of the IYS. This Symposium welcomed over 200 participants from at least 10 countries across the Atlantic, Pacific and Arctic Ocean regions who came together to explore the conditions necessary for the resilience of salmon and people in a rapidly changing world. The Symposium was the culmination of over 13 workshops and Symposia, three historic NPAFC High Seas Expeditions in the Pacific, and over 80 associated events across the North Atlantic and North Pacific Basins, in addition to numerous projects across the Atlantic funded by NASCO’s Parties through two sets of grant funding. Additionally, the IYS helped to facilitate the inclusion of three significant events immediately preceding the Symposium in Vancouver: the Northern Hemisphere Pink Salmon Experts Meeting; the International Gathering of Indigenous Salmon Peoples and the IYS 2022 Pan-Pacific Expedition Preliminary Results Meeting. Insights from all three meetings were brought forward and shared at the larger Synthesis Symposium event.

What we heard: key messages on the future needs of salmon

The experience of the IYS Synthesis Symposium contains important lessons and takeaways to inform strategic priorities for future work that could be considered by NASCO. These messages include:

Broad-scale partnership and collaboration to facilitate scientific research and management approaches are possible, essential and effective.

No one country or agency can conduct all the monitoring and research needed to address basin-wide, climate-related issues. Through multilateral co-operation, countries can leverage investments, share knowledge and capacity, and expedite effective management actions that build resilience into management systems. This is demonstrated by the success of IYS Signature Projects such as the Likely Suspects Framework in the North Atlantic, the High Seas Expeditions in the North Pacific and data mobilisation efforts that span both Atlantic and Pacific basins.

Regional Fisheries Management Organizations share a common challenge in responding to climate change and can benefit by co-ordinating their efforts.

At present, efforts of Regional Fisheries Management Organizations, and Intergovernmental Treaty Organizations, overlap in spatial or contextual interests. While there is a history of co-operation on administrative issues, in-depth collaboration on science and management is limited. Given the severity of climate change impacts and the parallels in the challenges faced, these organizations could consider collaboration and co-ordination to enhance their ability to adapt management regimes to climate change.

The inability to mobilise data is one of the most significant impediments to salmon science and management.

Much like the experience with Covid-19, well-informed and timely decisions, whether related to public health policy or salmon resource management, demand the ability to share, analyse and report data rapidly. Salmon data relevant to both NASCO and NPAFC are housed in many formats held either by the Parties or within the jurisdictions of those Parties. Although some data are in well-documented and accessible repositories, other data are inaccessible or at risk of being lost or forgotten. Applying current approaches to mobilise data such that they adhere to the FAIR data principles (data that are Findable, Accessible, Interoperable, and Reusable) and CARE principles for Indigenous data governance (Collective benefit, Authority to control, Responsibility, Ethics) is of urgent importance.

Indigenous salmon management systems are under-represented in Regional Fisheries Management Organizations.

Respectful and robust salmon management systems grounded in Indigenous rights and ways of knowing can foster sustainable outcomes for salmon and people. Indigenous knowledge and management systems have sustained salmon for thousands of years. Calls for greater Indigenous sovereignty over traditional resources, from the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), have provided the impetus for national and international regulatory bodies to recognise the need to share, if not devolve, responsibility for salmon and climate change management to Indigenous communities. NASCO's commitment to host a Special Session on Indigenous Perspectives in 2023 is one way that we can begin to recognise this need.

Virtual meeting environments are extremely effective when paired with appropriate in-person opportunities.

An unexpected consequence of the Covid-19 pandemic was that a constituency now exists that is fully trained in video conferencing and technology, able to conduct effective virtual meetings, workshops, and symposia. This has been demonstrated in NASCO by virtual Annual Meetings in both 2020 and 2021 and the organization of the Synthesis Symposium itself, in addition to several virtual inter-sessional meetings, Working Groups etc. Additionally, NASCO hosted a functional virtual Secretariat office during two years of the pandemic. Building relationships and making lasting connections to enable the mandate of international co-operation does require opportunities for in-person interaction, therefore, a balanced approach that supports both virtual and in-person venues is likely to achieve the best possible outcome.

Overview of the Synthesis Symposium, by IYS Theme

During the Symposium, salmon scientists, managers, and Indigenous knowledge holders from across the Northern Hemisphere presented live, recorded, and poster presentations that were organized under the five IYS research themes. Each IYS theme had an overarching objective and a range of sub-themes. Professional facilitation services were contracted to engage with participants and to summarise key elements from presentations and discussions that were put forward during the Symposium. Additionally, a follow-up survey was provided to participants to collect feedback on their overall experience and recommendations for future collaborative fora.

The reflections that follow are an amalgam of the key messages received during the Symposium and from the follow-up survey.

IYS Research Theme: Status of Salmon

Objective: the present status of salmon and their environment is understood.

What was learned. Achieving this objective requires the support of broad collaborations that increase and build on our current understanding of salmon and their environments, as well as the changes occurring to them. As evidenced by the presentations made throughout this topic session, the early life history and beginning of the ocean life stage of Pacific and Atlantic salmon remain poorly understood and scientists are still unsure of which salmon life history phase experiences the highest mortality or why. As urban development increasingly impacts aquatic environments, barriers to reliable predictions and forecasting are increasing. To have a complete understanding of salmon during each of its life history stages, it is important to link freshwater to ocean life stages and look at ecosystem effects and interactions between species. It is also crucial to include multiple knowledge systems in this work.

Overcoming the gaps to understanding the complex status of both Pacific and Atlantic salmon and their environments requires sustaining the resourcing of long-term recovery, restoration, monitoring, and data repositories. Most importantly, we must determine what collaborations are needed, which collaborations need support and at what scope and scale.

IYS Research Theme: Information Systems

Objective: freely available information systems contain historic and current data about salmon and their environment.

What was learned. Scientific surveys and research projects, which are run locally or nationally, are not always broadly available and some researchers resist contributing to data mobilisation

activities. When information exists in silos, it creates gaps in effective collaboration and communication; what is required, therefore, is global access to information and data that have already been gathered and learned in salmon science and related fields. Data need to be shared with the right people and applied to different layers of knowledge to achieve the ultimate aim of knowledge mobilisation. A clear message heard during the Synthesis Symposium was that Indigenous peoples need and expect to be included in this conversation. In particular, there was a call for Indigenous knowledge to be included as part of our global understanding of Atlantic salmon, and for consideration to be given to Indigenous data sovereignty, in places where this knowledge is held.

Although there is still a long way to go in advancing information systems, much has been achieved. Novel technologies are allowing for near real-time monitoring to help improve management decisions, help disseminate data and allow for more effective communication.

IYS Research Theme: Salmon in a Changing Salmosphere

Objective: the effects of natural environmental variability and human factors affecting salmon distribution and abundance are understood and quantified.

What was learned. Ecosystem-based and whole life cycle approaches are required in order to achieve this objective fully. Synthesising and applying information across disciplines is a challenging, but necessary, component to understanding how Atlantic salmon and their habitats are impacted by anthropogenic activities, including climate change. Collaborative projects such as the Likely Suspects Framework (UK) and Atlantic Salmon Research Joint Venture (North America) have provided the opportunity for analysis at the temporal and geographical scales necessary to begin to understand changes to the abundance and distribution of Atlantic salmon and have experienced success and challenges to their respective efforts.

IYS Research Theme: New Frontiers

Objective: new technologies and analytic methods are advanced and applied to salmon research, and that this research is carried out to fill gaps in poorly studied regions of the salmosphere.

What was learned. Better accessibility to specific fields of salmon science such as genetics research is important, as few people have access to this kind of information. Better tools and methods are needed to both assess and address the limiting factors in these analytical methods, and effectiveness should be enhanced so that the process of filling these gaps can be expedited. It is crucial that data gaps continue to be filled and illuminate the ‘black boxes’ in salmon research, such as the marine life history phase and ocean survival. Additionally, Indigenous communities and community stewards need better accessibility to new technologies, research and information.

IYS Research Theme: Human Dimensions

Objective: communities, Indigenous peoples, youth, harvesters, scientists, and resource managers across the Northern Hemisphere share knowledge and collaborate in the development of new tools and approaches to restoring, managing, and sustaining salmon.

What was learned. Having multiple knowledge systems (e.g. western science and Indigenous knowledge) working together is the best way to solve a problem as complex as that of understanding Pacific and Atlantic salmon in a rapidly changing world.

Indigenous peoples and local communities need to be present in discussions around salmon research and management at every level, from the riverbank to the boardroom, and from

government to private industry. Outreach and communication should be strengthened to broaden public awareness and support around salmon science and management outcomes. Effective communication encompasses both traditional outreach and strong communication between disciplines. This includes supporting various systems to collate relevant data and make these data accessible to managers, researchers, and communities – a thread running throughout the IYS theme outcomes. Consideration needs to be given to the scale and scope at which our communication strategies should be targeted and for creating the long-term platforms that will bring together the right people across the Northern Hemisphere

Conclusions from the IYS Synthesis Symposium

Over the course of the three-day IYS Synthesis Symposium and accompanying satellite workshops, participants from three ocean basins (i.e. Atlantic, Arctic and Pacific) had a chance to network and engage with a wide range of topics related to the IYS themes. During the final plenary discussion, there was unanimous agreement that there is an urgency to salmon conservation that requires informed action.

The key messages arising from ‘*what we learned*’ at the IYS Synthesis Symposium could be reflected upon by Council, as it responds to the recommendations from the third performance review. Although the end of the IYS programme has been reached, the connections established between NASCO and NPAFC should not be lost. Responding to the key messages could solidify these connections and support NASCO Parties in their ongoing efforts to better understand, manage, and conserve salmon. Thus, rather than concluding the IYS and returning to business as usual, organizations such as NASCO and the NPAFC can build on the legacy of the IYS to enable the conditions necessary to ensure the resilience of salmon and people in a rapidly changing world.

Budget

The IYS Fund was established in 2017, with a contribution from the Parties of £60,000. In 2020, the then budget surplus of £60,800, not including the EU IYS grant money, was used to establish the ‘Periodic Projects Special Fund’ – see [CNL\(20\)48](#) and paragraph 4.3 of [CNL\(20\)51rev](#). This Special Fund was established to ‘*help avoid large swings in NASCO's budget from year-to-year where monies are needed to support necessary and higher cost intermittent activities, such as future performance reviews, International Year of the Salmon (IYS) legacy activities such as those agreed by Council in 2019 (i.e. the updates to the State of North Atlantic Salmon report and follow up Symposia), and other costly special projects*’.

The EU IYS grants were wound up in 2022. The cost of the IYS Synthesis Symposium to NASCO was less than the £25,000 anticipated, at £17,962.94. As of 26 April 2023, all IYS activities are now complete.

The remainder in the IYS Fund is £17,656.96.

Given that a previous IYS Fund surplus was used to prime the Periodic Projects Special Fund, Council may wish to transfer the remaining funds to the Periodic Projects Special Fund and close the IYS Fund account once the final balance has been established after the audit of the 2023 accounts.

NASCO IYS Synthesis Symposium Steering Committee
Edinburgh
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