



B.C. Wild Salmon Advisory Council

Recommendations for a *Made-in-B.C. Wild Salmon Strategy*



**Prepared for the Province of British Columbia
February 2019**

The members of the Wild Salmon Advisory Council (WSAC) would like to thank the Province of British Columbia for the opportunity to contribute to the development of a made-in-B.C. *Wild Salmon Strategy*. The past seven months of work, including extensive public engagement, has confirmed our belief that the government is taking an important and necessary step by showing leadership on this issue. There is no question that wild salmon are iconic for this province. They link us to our history and hold the promise for our future generations. Wild salmon are woven into the culture, histories and economies of communities throughout B.C. – for the Indigenous peoples of B.C. since time immemorial.

Wild salmon help to support our ecosystems, our Indigenous peoples and the people who depend on them for their lives and livelihoods. However, wild salmon and their habitats are in a seriously weakened state and require intentional energy and investment to secure their future. We have done our best to ensure that our recommendations – including those for immediate action – will contribute to this goal.

The complex task of restoring salmon abundance and optimizing the benefits to British Columbians simply cannot be done without a provincewide effort. The members of the Wild Salmon Advisory Council are encouraged by this journey and hope that, with the help of every British Columbian, wild salmon and the communities that depend upon them will flourish.

Co-Chairs:

Doug Routley, MLA for Nanaimo-North Cowichan, and
Chief Marilyn Slett, Heiltsuk First Nation

Council Members:

Thomas Alexis

Mike Hicks

Martin Paish

Ward Bond

James Lawson

Cailyn Siider

Ian Douglas Bruce

Dawn Machin

Tasha Sutcliffe

Ray Harris

Adam Olsen

Joy Thorkelson



Table of Contents

Introduction	2
The framework used to guide the work of the WSAC	3
1. A Shared Vision for the Future	3
2. A Shared Definition of 'Wild Salmon'	3
3. An Acknowledgement of Jurisdiction	4
4. Recognizing the Virtual Circle of Inter-Connectedness	4
Information and insights shaping the WSAC's recommendations	5
1. The State of Wild Salmon and Steelhead in B.C.	5
2. Indigenous Peoples and Wild Salmon	7
3. B.C.'s Fishery Economy – Commercial and Recreational Fishing and Onshore Processing	8
Input, feedback and advice received in response to the WSAC's Options Paper	10
1. Engagement Overview	10
2. What the Wild Salmon Advisory Council Heard	12
The WSAC's recommendations to the Province of B.C.	17
1. Preamble	17
2. Recommendations	19
GOAL 1: Increase the abundance of wild salmon	19
GOAL 2: Protect and enhance the economic, social and cultural benefits that accrue to B.C. communities from wild salmon and other fisheries, placing emphasis on adjacent communities.	22
GOAL 3: Develop mechanisms, processes, practices and structures to engage citizens and governments in the effective stewardship and management of B.C.'s wild salmon.	25
Conclusion	27

Introduction

The management of wild salmon in British Columbia is a significant task, complicated by the unpredictability of ecosystems; the jurisdictional authorities of federal, provincial, municipal and Indigenous governments¹; the interests and needs of ecosystem health, stakeholders and communities; and the challenges, positions and opinions of our collective past.

The 14 individuals who comprise the membership of the Wild Salmon Advisory Council (WSAC) were appointed by the Province of British Columbia through the Office of the Premier in June 2018. They were selected to represent a wide diversity of interests and experiences related to wild salmon in B.C. Their work over the past seven months is to advise the provincial government in support of the development of a made-in-B.C. *Wild Salmon Strategy*.

In fall 2018, the WSAC presented an *Options Paper*² to government, which provided initial insights and guidance on protecting wild salmon and maximizing the value of this resource for B.C. The *Options Paper* focused on three key areas as outlined in the WSAC's mandate:

- Restoration and enhancement of wild salmon populations;
- Sustainable fisheries management and stewardship opportunities for communities; and
- New economic development opportunities to assist viable and sustainable community-based fisheries.

The *Options Paper* recognized:

- **First**, that wild salmon are facing a complex set of ever-intensifying pressures from ecosystem changes and from development. Many populations have already been significantly weakened by these pressures. They require strategic and systemic support to secure their survival over the long term. There is urgency in the task at hand.
- **Secondly**, it is imperative that we design ways to return the value of wild salmon and fisheries to the people of British Columbia, particularly to communities adjacent to resources that have always depended on wild salmon and fisheries as a cornerstone of their economies; active fish harvesters who are front-line users and stewards of the resource; and Indigenous peoples whose histories and futures are interwoven with fisheries in so many ways.

The *Options Paper* formed the basis of an engagement process (described on page 10) that included community meetings, online engagement and direct discussions with stakeholder groups and Indigenous fishing organizations.

The recommendations in this report were significantly informed by the input received during this engagement and aim to contribute to reversing the declining trajectory of wild salmon in B.C., and to help stimulate community economies through a focus on (a) increasing wild salmon abundance, (b) protecting and enhancing the benefits that accrue to B.C.'s communities from the wild salmon resource, and (c) ensuring effective mechanisms for community engagement and government action.

The recommendations include a preamble that suggests the overall conditions for success for a made-in-B.C. *Wild Salmon Strategy*. Both immediate actions determined necessary to stem the tide of further population decline, and mid-term actions that require more detailed planning for implementation have been identified and presented.

¹ The WSAC accepts the principle that Indigenous Nations have the right to define their governance structures according to their own laws and cultural practices, and have the right to engage with other governments around the issues related to wild salmon using the structures and processes that respect their laws.

² <https://engage.gov.bc.ca/app/uploads/sites/426/2018/11/Wild-Salmon-Strategy-Options-Paper.pdf>

The framework used to guide the work of the WSAC

1. A Shared Vision for the Future

The members of the Wild Salmon Advisory Council brought different perspectives and interests to the advisory table. This made it both exciting and complex to explore opportunities and challenges with respect to its mandate and subsequent recommendations. Creating a shared vision was an important early step in the WSAC's work.

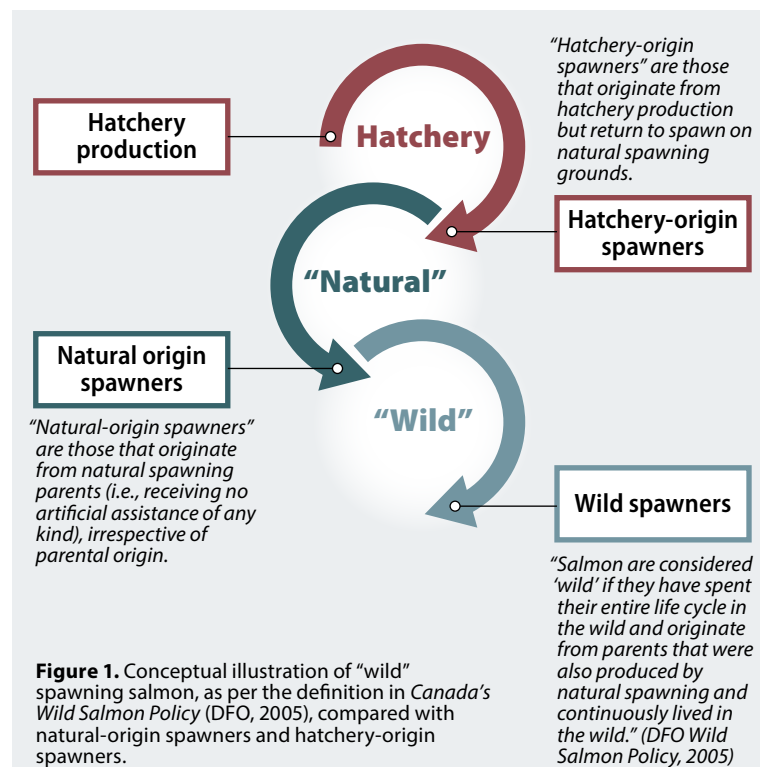
Council members agree that a made-in-B.C. *Wild Salmon Strategy* will help set the stage for improved marine and freshwater ecosystems in B.C., and for benefits to communities and their economies. To achieve these two objectives the strategy should:

- **Support and enable the return of abundant wild salmon stocks** throughout the province – recognizing their inherent importance for both people and for ecosystem health;
- **Promote economic renewal and reconciliation with B.C.'s Indigenous peoples**, including a recognition of their Section 35 constitutional right as Aboriginal peoples to access fish for food, social and ceremonial purposes, their treaty and court-affirmed rights to access salmon for economic purposes, and their role in fisheries management;
- **Rebuild a formidable, local fishery economy** with sustainable jobs and prosperous businesses across the seafood spectrum, including active fishers – recreational and commercial; seafood processing; and ancillary businesses;
- **Champion community access to, and benefit from, adjacent fisheries resources** to support local employment, food security, and economic development; and
- **Support responsible, sustainable and safe fishing.**

2. A Shared Definition of 'Wild Salmon'

Likewise, addressing the complexities of wild salmon, and enhancement in particular, required the WSAC members to agree to a definition of wild salmon that would guide their work. The WSAC agreed to use the definition of "wild salmon" developed and used in *Canada's Policy for Conservation of Wild Pacific Salmon*³, as per Figure 1. This policy states that "salmon are considered to be wild if they have spent their entire life cycle in the wild and originate from parents that were also produced by natural spawning and continuously lived in the wild". While this definition has caused some confusion, it was intentionally developed to ensure that salmon had one full generation in the wild to safeguard against potential adverse effects that can result from intensive artificial culture in hatcheries.

Given this definition, the recommendations in this report include the use of enhancement techniques as a tool to support and engender "wild" populations of salmon, while also providing fish for ecosystem health; for Indigenous food, social and ceremonial



3 *Canada's Policy for Conservation of Wild Pacific Salmon*, 2005, Page 1.

purposes; and for commercial and recreational harvest. Under carefully controlled circumstances, these tools may include, but are not limited to, hatcheries, spawning channels, sea pens, lake fertilization and migration barrier mitigation. In all cases, there is recognition of the need for science-based decision-making and structured monitoring over time to support enhancement efforts.

3. An Acknowledgement of Jurisdiction

The successful management of wild salmon populations in B.C. is complicated by the fact that they travel through multiple jurisdictions during their natural lifecycle. The WSAC has been careful not only to acknowledge these jurisdictions but also to keep jurisdiction top-of-mind in making its recommendations. Looking across the full spectrum of what is possible, the WSAC's summary comment is that "wild salmon need a thoroughly co-ordinated, intentionally designed and very collaborative system in order to flourish."

4. Recognizing the Virtual Circle of Inter-Connectedness

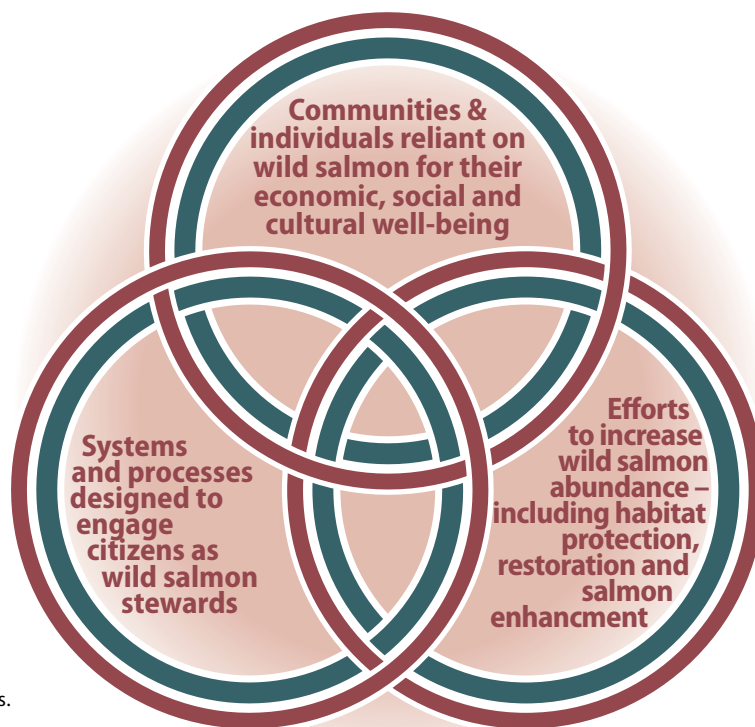


Figure 2. Virtual circle of inter-connectedness.

As illustrated above in Figure 2, WSAC members heartily agree that wild salmon abundance, stewardship and sustainable harvesting practices are connected in a virtuous circle. One without the other two is far less likely to succeed or matter in the longer term. Wild salmon abundance is dependent on people who care about salmon and are prepared to play a role in their survival. Community stewardship engages people to learn and care about wild salmon and creates mechanisms for individuals and communities to participate in resource renewal and sustainable resource management. Communities and resource users – such as commercial and recreational fishers who are contributing jobs and economic opportunity to their communities, understand and have a stake in being resource stewards. Indigenous communities dependent on healthy and abundant stocks for food, social and ceremonial purposes, as well as for economic health, have a constitutionally protected right to participate in fisheries stewardship and management. All parts of this system support and reinforce each other.

Information and insights shaping the WSAC's recommendations

1. The State of Wild Salmon and Steelhead in B.C.

The challenge in describing the state of wild salmon⁴ and steelhead is the fact that there are more than 8,000 combinations of species and streams in B.C. that have been affected by over 100 years of development and use. In an effort to manage this complexity, Canada's Policy for the Conservation of Wild Pacific Salmon (2005) has adopted the concept of Conservation Units (CUs) that aggregate these combinations for management purposes. There are currently 432 CU's in B.C., shown in Table 1.

Table 1 Salmon Conservation Units in BC (2018)

Sockeye	Pink	Chum	Coho	Chinook	Steelhead
253	33	39	41	66	Not defined

A *State of the Salmon Report* was commissioned from the Pacific Salmon Foundation (PSF) to establish a baseline for the WSAC's work. Using its Pacific Salmon Explorer tool⁵, PSF confirmed that while the true status of wild salmon and steelhead in B.C. is difficult to determine with any degree of certainty, there is no doubt that there are some significant challenges. Available data is highly variable by both species and region and there are significant data gaps in some areas – work is ongoing. There has been a substantial decrease in the numbers of streams surveyed annually for escapement monitoring⁶. The decrease has been greatest for species/stream combinations historically monitored using visual surveys, but some more expensive surveys have also been terminated. These changes mean that any cumulative indices of escapement may not be a consistent annual index.

Below are some of the findings from PSF's *State of the Salmon Report*. PSF confirms that across all regions and all species, the overall abundance of wild salmon and steelhead has declined since the 1950s. Comparing data for the past decade with the time series 1954-2016, wild salmon productivity in the north and central coast (NCC) shows declines of 20% to 45%, and in southern B.C. declines of 43% for sockeye, and 14% for chum have been evidenced, although pinks have increased by ~24% in this region. Chinook salmon throughout B.C. have experienced a widespread decrease in productivity, but these rates are highly variable between years and rivers. There is also increasing concern for changes in the biological characteristics of Chinook salmon, including earlier ages at maturity, smaller size at age and reduced fecundity at maturity. Each of these characteristics contributes to a reduced production and productivity rate⁷. Steelhead trout populations vary from critically poor in the interior Fraser River⁸, to recently decreasing stocks in Southern B.C. (non-Fraser) and Central B.C., to stable to positive in Northern B.C.

⁴ The specific reference to state of salmon as opposed to a status assessment is because the latter requires the existence of abundance targets or biological reference points that do not exist for most BC Pacific salmon.

⁵ www.salmonexplorer.ca

⁶ *State of the Salmon Report*, Pacific Salmon Foundation, 2018 (Commissioned by Coastal First Nations in their role as secretariat to the WSAC).

⁷ Catch and spawning abundance are components of the annual production or abundance of a salmon population. Understanding change over time requires consistent annual reporting of catch and escapement that can then relate the number of parental fish to the number of progeny produced. The number of progeny produced per parent is the productivity of a salmon population. Productivity assessment determines the harvest rate, with the aim of sustaining production levels over time.

⁸ Endangered and at imminent risk of extinction, COSEWIC 2018.

The vast majority of the estimated 423 steelhead populations in B.C. belong to three major genetic groups. In addition, there are two transition groups that reflect genetic mixing. Steelhead population status in the North Coast, which spans an area over the northern half of the steelhead range within B.C., is informed mainly by the state of Skeena steelhead, which appears to have been stable over the past 20-years, fluctuating near or above biological reference points intended to sustain steelhead production. Steelhead status within the Northern Transition group is informed by Dean and Bella Coola steelhead. Dean steelhead may have undergone a decline to the mid-2000s, while Bella Coola steelhead have clearly declined and remain in a state of relatively low abundance. In Southern B.C., steelhead population status involves three groups (South Coast, South Interior and the Southern Transition). Each is in a state of decline. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has classified the Thompson and Chilcotin populations as Endangered and at imminent risk of extinction. In the South Coast, pinniped predation, extreme climate events and forestry-related stream degradation are contributing to wide spatial scale declines, most dramatic among winter-run populations. Most recently, a decline in Gold River steelhead is particularly noteworthy given its history as a premier B.C. steelhead stream.

Poor marine survival rates appear to be a significant factor across wild salmon declines. Changing ocean conditions due to climate change and other factors, both natural and manmade, will likely continue to hinder recovery efforts in the future. Local habitat conditions, including poorer water quality/quantity and detrimental land uses, are also taking their toll. Fisheries managers have also expressed concern about the potential wildfire impacts in the Interior to wild salmon populations in the Lower Fraser Basin that are currently unknown.

It must also be noted that investment in scientific study and data quality and quantity with respect to wild salmon management has been significantly reduced over the past several years. This fact has contributed to a lack of confidence when reporting the status of salmon in B.C., and fueled hard debates among stakeholders about the reliability of data used to make fisheries management decisions. In the face of this uncertainty, Table 2 offers a summary of the state of wild salmon in B.C.⁹ based on the best currently available information.

Table 2 Pacific Salmon on B.C.'s Coast

North and Central Coast

Sockeye: Very abundant. Returns have declined since mid-1990s. (-33%)

Pink: Most abundant species on NCC. Recent years, returns often below long-term averages. (-28%)

Chum: Historically very abundant. Have seen some of the largest declines over 10 years. (-45%)

Chinook: Historically least abundant species. Recent returns well below long-term average. (-26%)

Coho: Abundance has declined over time but maintaining relative consistent numbers. (-21%)

South Coast (SC)

Sockeye: Typically, the most abundant of all species on SC. Dominated by Fraser River runs. Huge variations in run size each season. (-43%)

Pink: 2nd most abundant species on SC. Average abundances above long-term averages. Last 2 runs (since 2013) reduced. (+24%)

Chum: Abundances below long-term average, but similar to the period from 1950s-70s. (-14%)

Chinook: Data deficient. The subject of a 2018 COSEWIC review – not yet reported. Okanagan Chinook listed endangered, COSEWIC 2017. At present CUs in the SC are rated as: Green (2), Amber (1), Amber/Red (1), Red (10), Data deficient (9) and TBD (7).

Coho: Data deficient. Interior Fraser River coho were assessed as Threatened by COSEWIC, 2016.

⁹ *State of the Salmon Report*, Pacific Salmon Foundation, 2018 (Commissioned by Coastal First Nations in their role as secretariat to the WSAC).

2. Indigenous Peoples and Wild Salmon

Indigenous peoples in British Columbia are inextricably connected to wild salmon. The bonds, for both coastal and upriver Indigenous communities, are deep and significant. Language, ceremony and song connect the people to the land, fish, animals and plants – reminding them that they are related, and that they must respect and honour one another. In the Indigenous world view, the animals and plants are teachers. They sacrifice themselves for people to survive. They connect the people to their lands and to their histories. They are a source of wonder. The value of wild salmon goes far beyond their economic value. They are sustenance for both body and spirit.

For this important reason, a made-in-B.C. *Wild Salmon Strategy* cannot succeed without the active and deliberate engagement of Indigenous governments and fisheries organizations. The issue of wild salmon – both rebuilding abundance and defining enhanced community benefits also has the potential to contribute to reconciliation.

The *Options Paper* outlines the Rights and interests of the Indigenous Peoples in B.C. as affirmed by the constitution of Canada (Section 35), by historic and modern-day treaty agreements, and by numerous court challenges.

Today, B.C.'s landscape and culture includes more than 190 Indigenous communities located adjacent to rivers or in coastal areas with salmon, and fishing interests stand out as a particularly unifying issue. Almost all Indigenous peoples in B.C. have active salmon-bearing streams in their Territories, from the Fraser and Skeena River watersheds to small coho creeks. In some Territories, salmon have been extirpated (e.g., the upper Columbia River) or significantly reduced from their historic abundance (e.g., Okanagan region) through habitat loss, migratory barriers and over-fishing.

Most Indigenous peoples have a common history of their once significant access to fisheries resources being gradually and, in some cases, dramatically reduced. In some cases, the decrease in access has been due to habitat loss. In others, it is the result of natural or human-caused species decline. Much of the loss of Indigenous peoples' access to fisheries resources, however, can be attributed to government policies, regulations and programs that intentionally or indirectly reduced their participation in food/social/ceremonial, commercial and recreational fisheries.

The clear objective today of most, if not all, Indigenous peoples in B.C. is to increase their access to fisheries for both food and economic purposes, and to be involved in the management of these resources. There is a common expectation that increased access to fisheries can again help feed and economically support Indigenous peoples and communities. Increased salmon access can be delivered via three complementary routes:

- Increased salmon abundance;
- A reallocation of salmon; and
- A greater degree of integration into B.C.'s commercial and recreational fisheries.

Currently, Fisheries and Oceans Canada's Salmon Allocation Policy and other DFO policies, regulations and management plans recognize the priority of the food, social and ceremonial right (FSC) after conservation. The challenge for management agencies is to put the FSC priority into effect for Indigenous harvesters and Indigenous peoples' communities that are in many circumstances situated 'upstream', or after, seaward commercial, recreational and where Indigenous fisheries occur.

Today, the B.C. First Nations Fisheries Council (FNFC), organized into 13 regions, works to increase Indigenous peoples' access to fisheries and their involvement in fisheries management and decision-making. Activities of both individual and/or aggregate fisheries programs include: salmon assessment; catch monitoring; hatcheries and low-tech enhancement; habitat restoration; and fisheries management. Most activities take place with the support of federal and provincial management agencies. In many regions, Indigenous groups and communities work with other local salmon interests (environmental, recreational and commercial) and governments through area-specific advisory bodies to raise funds and advise government agencies (including Indigenous) on local stewardship activities and harvesting plans.

3. B.C.'s Fishery Economy – Commercial and Recreational Fishing and Onshore Processing

The WSAC's *Options Paper* includes a detailed description of the state of B.C.'s fisheries economy, which serves to emphasize the critical need for a wild salmon strategy that encompasses real opportunities for the citizens of B.C., and particularly for the communities adjacent to fishery resources, to benefit economically from increased abundance.

B.C.'s recreational fishing sector is recognized as one of the best in the world, attracting visitors to both tidal and non-tidal opportunities. Today, about 300,000 licence holders participate in the tidal recreational fishery each year in B.C., managed by Fisheries and Oceans Canada. Non-tidal recreational fishing is managed by the Province of B.C., and includes a diverse range of fishing experience and settings; from char, pike and walleye angling in the Arctic drainage of the Peace region; to white sturgeon fishing on the Fraser River; from cutthroat and rainbow trout fishing on small Interior lakes; and steelhead angling on world-class rivers systems. Recreational fishing is both an important tourism driver and a part of B.C.'s culture¹⁰.

Since the mid-1990s, ecosystem changes have reduced coho and Chinook populations in the Strait of Georgia and shifted the marine-based recreational fishing effort/opportunities to the west coast of Vancouver Island and the northern coastlines. Inland recreational efforts have been negatively impacted by steelhead and sturgeon declines. Recognizing that the most critical factor for success in the recreational fishing sector is maintaining "opportunity" and "expectation", catch-and-release regulations, although controversial for some, have been introduced as an important management tool to develop trophy fisheries, minimize impact on non-target species and protect at-risk fish populations.

Securing reliable, diverse and high-quality recreational fishing opportunities today is challenged by many factors, including: climate change and other factors that negatively affect aquatic ecosystems; intensifying Indigenous fishing interests; conservation measures for both fish and fish-dependent species; and transboundary treaties that are shifting annual allowable catch limits for key species.

For a hundred years, the B.C. commercial salmon fishery has been an important contributor to B.C.'s economy, and it has supported community and cultural development for generations, and since time immemorial for Indigenous Peoples. BC wild salmon remain important to local and regional economies and are a defining element of the social and cultural fabric of many coastal and inland communities. Although considerably reduced due to species decline and management decisions, the commercial wild salmon fishery continues to support numerous family-owned fishing businesses, fisheries infrastructure, and ancillary services such as shipbuilding and processing.

Today, the data shows that in B.C.'s wild salmon and seafood sectors, the citizens of B.C. and, most importantly, the communities most reliant on the resource for their economies, are receiving proportionally less economic benefit from fisheries harvests than they were even a decade ago. Shrinking and aging fishing fleets, shuttered processing facilities and increasingly limited employment opportunities are symptomatic of this reality. In spite of the fact that the global demand for seafood is increasing exponentially, that market prices are rising, and that B.C. has some of the finest product in the world, our commercial fishing sector is not demonstrating the benefits for B.C.'s economy or communities that it should.

For B.C. to maintain a vibrant commercial fishing sector, it is critical to address a number of inter-related issues, including: ensuring that the burden of conservation is not unduly borne by the commercial sector; recognizing and supporting the efforts taken by this sector to ensure sustainable stocks; seeking ways to redirect commercial salmon fishing opportunities to adjacent communities and to next-generation fishers through creative licencing policies; and investing in the kinds of innovations that will allow active fishers and adjacent communities to receive increased value from their catch.

¹⁰ BC's Fisheries and Aquaculture Sector Report – 2016 edition and the 2010 DFO National Recreational Fishery Survey note the following statistics for the recreational fishing sector: \$1B contributed to the province's economy, accounting for .5% of total real GDP.

There is no simple solution to this challenge. It has been created by deep structural issues that have shifted resource access into fewer hands, forced or allowed business consolidation and vertical integration, allowed offshore ownership of the resource, and enabled more seafood processing to move out of rural communities. The cumulative result of these changes has been to the detriment of fishing and processing jobs in B.C. communities, and particularly in rural areas adjacent to the resource¹¹. A multi-year, deliberate plan to correct the current course, using the many tools available to the Province, is required at this juncture. Significantly enhancing the benefits from our fisheries' resources that accrue to the citizens of B.C. is a key intention of the WSAC's recommendations.

Weaving a balance between those who would conserve wild salmon and those who would fish them is challenging. Some argue that too much fishing activity (be it recreational or commercial) is the key cause of wild salmon declines. Others argue that it is exactly the economic, social and cultural benefits that accrue from salmon fishing activities that make people care about protecting them. The WSAC believes that B.C.'s *Wild Salmon Strategy* must be located in a way that acknowledges and honours both perspectives.



¹¹ Fisheries Seasonality and the Allocation of Labour and Skills, Labour Market Information Study, Canadian Professional Fish Harvesters, 2018.

Input, feedback and advice received in response to the WSAC's Options Paper

1. Engagement Overview

The WSAC's final report and recommendations have been significantly informed by an engagement process with British Columbians. The aim of the engagement was to hear directly from B.C. citizens on the development of a made-in-B.C. *Wild Salmon Strategy*. In particular, the engagement process focused on receiving input on the WSAC's *Wild Salmon Strategy Options Paper*¹², which was presented to government in fall 2018 and provided initial insights and guidance on protecting wild salmon and maximizing the value of this resource for B.C.

During December 2018 and January 2019, community meetings were hosted by WSAC members in seven locations: Campbell River, Port Alberni, Skidegate, Prince Rupert, Richmond, Kamloops and Langford. The meetings were town-hall style and involved a short presentation by the WSAC hosts on the strategy development process and *Options Paper*, followed by attendees providing their feedback to the WSAC hosts and audience. Members of the project team maintained a list of speakers and kept a record of comments provided at each meeting. Concurrent to the community meetings was an online engagement process, which provided the opportunity for input to be submitted through an online feedback form or by email.

These engagement opportunities were communicated in several ways, including on the initiative's engagement webpage, through print and digital advertising, and through direct invitations. During the engagement period, there were 4,842 site visits to the engagement webpage, which included information on the wild salmon strategy development process, the *Options Paper* (and a two-page summary document), the community meeting schedule and access to the online feedback form. Print advertisements in local newspapers and digital advertisements on Facebook (see Table 3) provided details on upcoming meetings, as well as information on the online engagement. Direct invitations to community meetings were sent to MLA offices, Mayors and Councillors, First Nations governments, and local stakeholder groups in advance of each meeting.

¹² <https://engage.gov.bc.ca/app/uploads/sites/426/2018/11/Wild-Salmon-Strategy-Options-Paper.pdf>

Table 3

Meeting location/date	Print advertising Total circulation: 162,222	Digital advertising Total reach: 571,432
Campbell River, Dec. 5	Campbell River Mirror Circulation: 16,808	Facebook Ad in Campbell River (Dec. 3-5)
Port Alberni, Dec. 6	Alberni Valley News Circulation: 9,186	Facebook Ad in Port Alberni (Dec. 3 – 6)
Haida Gwaii, Dec. 11	Haida Gwaii Observer Circulation: 848	Facebook Ad in Haida Gwaii/Prince Rupert (Dec. 7 – 11)
Prince Rupert, Dec. 17	Prince Rupert Observer Circulation: 7,406	Facebook Ad in Haida Gwaii/Prince Rupert (Dec. 13 – 17)
Richmond, Dec. 18	Richmond News Circulation: 46,265	Facebook Ad in Richmond/surrounding area (Dec. 15 – 18)
Kamloops, Jan. 8	Kamloops This Week Circulation: 30,691	Facebook Ad in Kamloops (Jan. 4 – 8)
Langford, Jan. 10	Times Colonist Circulation: 51,018	Facebook Ad in Langford/surrounding area (Jan. 6 – 10)

In addition, members of the WSAC held two days of direct meetings with stakeholder organizations in Vancouver. The Wild Salmon Secretariat also co-ordinated direct discussions with Indigenous fisheries organizations.

Overall, the engagement process was guided by the following questions:

- Which opportunities presented in the *Wild Salmon Strategy Options Paper* do you agree or disagree with? What's missing?
- Which issues and opportunities related to wild salmon are the most important to you and your community?
- What should BC's *Wild Salmon Strategy* prioritize?

During the engagement period, 317 comments were received through the online portal and 116 comments were received by email. An estimated 500 people attended community meetings, upwards of 150 speakers addressed Council members. WSAC members met directly with 17 stakeholder organizations, and the Wild Salmon Secretariat co-ordinated direct discussions with eight Indigenous fishing organizations.

Following the engagement period, the project team analyzed all input received for key themes. This information, along with the community and stakeholder meeting summaries, and online submissions upon request, were provided to the WSAC members for consideration during the development of this report and their final recommendations.

2. What the Wild Salmon Advisory Council Heard

Below is a summary of the key themes that emerged from the many valuable comments received during the engagement period.

- **Habitat protection:** Throughout the engagement period it was clear that the protection of existing habitat for wild salmon – from estuaries to headwaters – is a key priority area. It was emphasized that regulation of activities affecting freshwater and nearshore habitats is under provincial jurisdiction and requires additional focus by the Province, in concert with working to support efforts at other levels of government (e.g., municipal). The importance of intrinsic, ecosystem, cultural, food and economic values – from upriver areas to the coast – were emphasized to varying degrees as key reasons to protect salmon habitats and populations. Various threats to existing salmon habitat were noted, including resource extraction, infrastructure that impedes passage, urban development and climate change, among others. Many voiced concerns with a lack of compliance and enforcement related to existing laws and habitat infractions, while others stated that additional regulations are needed to further protect salmon habitats. Examples:
 - Laws/enforcement for forestry, agriculture, mining, and other sectors
 - Riparian Areas Regulation
 - Estuary regulations (near shore habitat management)
 - Environmental impact and cumulative effects assessments
 - Bill C-68 amendments to the federal Fisheries Act
 - Role of municipalities – zoning, storm water management, etc.
 - Infrastructure development and fish friendly criteria
 - ‘Heart of the Fraser’ – Herrling & Carey Islands
 - Tribal Parks for Salmon
 - Watershed level planning
- **Habitat restoration:** Similar to the above, many noted that restoring salmon habitat is a key priority area. There are many ongoing causes of damage to salmon habitat in B.C. that include, but are not limited to, flood control infrastructure, gravel extraction, logging practices, redundant dams and coastal development. Since restoration can be expensive, and with many systems badly degraded, it will be important to be strategic and co-ordinated, and take a whole watershed approach, when investing in further habitat restoration. There are many organizations already doing this type of work and with knowledge as to where additional work could be prioritized. It was also noted that further activity in this sector could provide employment opportunities. While the Fraser is in high need of restoration and is a significant body of water, so are many smaller rivers and streams throughout the province (including in urban areas), as well as estuaries that provide critical near shore habitat for rearing juvenile fish. Examples:
 - Community-based stewardship activities
 - Pacific Salmon Foundation and other stream keeper and stewardship groups
 - Increasing Salmon Conservation Stamp cost and funds for restoration activities
 - Oceans Protection Plan Coastal Restoration Fund activities
 - Planning and monitoring in the context of climate change
 - Corporate responsibility for habitat restoration
 - Flood control structures and improved fish passage
 - Indigenous peoples’ role leading restoration activities in their territories

- **Salmon enhancement:** Different enhancement options, scales and locations received varied response during the engagement. Some noted strong concern about the effects of hatcheries on B.C.'s remaining wild stocks (e.g., reduced genetic fitness, disease, competition for food), and stated that other actions would be more effective at rebuilding wild salmon. Some others suggested that hatcheries should only be used for genetic rescue of critically endangered stocks. Others noted the importance of hatcheries to certain areas, and that there should be support for additional production, in order to help rebuild runs and/or support harvesting opportunities. Adding complexity are the hatchery programs run by other countries around the North Pacific, and related marine survival concerns on the high seas. While some cited the hatchery experiences in the Western United States (e.g., Alaska, Washington) as a positive example for B.C. to learn from, others noted issues with the enhancement approaches in those states. Overall, it was suggested that a thorough evaluation of the benefits and risks of different enhancement options – including but not limited to hatcheries – will be important to the development of B.C.'s *Wild Salmon Strategy*. Examples:

 - Best practices for suite of enhancement tools
 - Hatchery reform – e.g. adipose clip, better monitoring
 - Risk assessments
 - Chinook production and southern resident killer whales
 - Wild Salmon Policy
 - Salmonid Enhancement Program
- **Community stewardship and education:** The engagement period highlighted the many stewardship groups and Indigenous communities already working to help sustain and rebuild wild salmon populations. These initiatives are often lacking the technical support and resources that they need, and improved co-ordination in program delivery would be beneficial. Some noted that grant cycles and programs are restrictive, not helpful to long-term planning and that they take too much time away from organizations that are increasingly volunteer led. The engagement period also highlighted the appetite for and importance of education opportunities related to wild salmon and community stewardship, which is important, not just at the K-12 level, but for adults and in universities as well. It was suggested that programming related to salmon could increasingly focus on freshwater environments and the importance of healthy habitats for wild salmon. Examples:

 - Salmon stewardship and stream keeper groups
 - Salmonids in the Classroom
 - Freshwater Fisheries Society of BC
 - Indigenous role in salmon stewardship and management
- **Pinniped predation:** Several suggested that predation by pinnipeds is a key issue for wild salmon, and that some form of a cull or harvest should be considered. Others noted concerns around this possibility, including that removal of pinnipeds could precipitate cascading ecosystem effects. Examples:

 - Science-based decision-making
 - Consideration of multiple causes of concentrated predation, e.g. log booms in estuaries
 - Focus on specific problem areas/animals
 - Recent U.S. legislation (Washington, Oregon, etc.)
 - U.S. Marine Mammal Protection Act and export considerations

- **Steelhead and cutthroat trout:** Many commented that a targeted focus on Pacific salmon within provincial jurisdiction (steelhead and cutthroat trout) and particularly those populations under threat of extinction, was missing from the *Wild Salmon Strategy Options Paper*. Several suggested that there is an immediate need for the development and implementation of emergency recovery plans for endangered populations. Connections between coastal commercial harvest restrictions and weak stock management meant to protect vulnerable runs were noted, as were other possible stressors and management actions for at-risk steelhead populations. Examples:
 - Recovery and rebuilding plan
 - Selective fishing
 - Emergency stock enhancement
 - Thompson and Chilcotin steelhead
 - COSEWIC listings
 - Connection to Marine Stewardship Council certification in commercial fishery
- **Water for salmon:** Ensuring appropriate water quality and quantity in salmon-bearing rivers and streams was noted as a key area of importance that is under provincial jurisdiction. Many threats to acceptable water quality/quantity for salmon were noted, including toxicity of storm water runoff, wastewater effluent/pollution, mining pollution, sedimentation and increasing frequency of flooding/drought events under climate change, among other issues. Opportunities for improvement that were suggested included working closely with municipalities, building green infrastructure, charging fair prices for water to industrial users and more local control of watershed planning. Examples:
 - B.C. *Water Sustainability Act*
 - Climate change adaptation
 - Green infrastructure
 - Raingardens, bio-swales, bio-detention ponds for filtering runoff
 - Best practices and funding for municipal projects and storm water improvement
 - Highway project infrastructure (dikes, culverts, etc.)
 - Water sustainability plans
 - Micro-plastics pollution in the lower Fraser River
 - Floodwater management and impediments to fish passage
 - Wastewater management
- **Data, research and science:** The need for better information (e.g., stock assessment, escapement, catch data) to influence decision-making, as well as the need for wider access to data, was noted. It was suggested that it is important to look not only at critical salmon habitats, but to overall watershed health as well. Marine survival, particularly amidst changing ocean conditions, was noted as an important area with the need for more data that could influence decision-making. Research into the availability of prey species for salmon (e.g., insects, herring) was also noted as an area where further information, and likely action, will be required in the context of a wild salmon rebuilding initiative. Examples:
 - PSF's Pacific Salmon Explorer
 - Aquatic Health Sciences 'Wet Lab'
 - Stock assessment
 - Traditional ecological knowledge
 - Technical round tables for *Wild Salmon Strategy* implementation
 - International Year of the Salmon research projects to better understand wild salmon issues in the high seas

- **Governance:** Many suggested that it will be important for a provincial *Wild Salmon Strategy* to focus first on areas of provincial jurisdiction, including factors affecting salmon habitat, such as water quality and quantity, water uses, land uses, estuary and near shore environments, parks and protected areas, highways and culverts, exotic and invasive species, dams, and freshwater lakes and rivers, among others. There was also widespread agreement that improved co-ordination within the province, and across multiple levels of government (First Nations, municipal, provincial, federal, international), should be an important focus of the strategy, rather than wasting resources on an unco-ordinated approach, duplication, or reinventing the wheel. The need to collaborate with and engage communities in the development and implementation of the strategy was also noted, as were concerns around the professional reliance model and governance of B.C.'s natural resource sectors. Examples:
 - Learning from previous work – e.g., Pacific Salmon Forum, Cohen Commission, Fisheries Renewal BC
 - Indigenous rights and management – e.g., First Nations Fisheries Council, Wild Salmon Summit
 - Co-ordination with existing/ongoing work – e.g., DFO's Wild Salmon Policy Implementation Plan, International Year of the Salmon, Shuswap Salmon Symposium, Salmon Roundtables, Watershed Councils and planning processes, and others
 - Enhanced provincial participation in important tables/forums
 - Ongoing community involvement throughout B.C. during strategy implementation
- **Monitoring and enforcement:** Monitoring was often described as a key area requiring further effort, and where there are strong opportunities for collaboration. It was noted that resource extraction and other industries require stricter penalties for infringements that degrade salmon habitat, and that regulatory regimes and “boots on the ground” could be enhanced to improve compliance and enforcement. Examples:
 - Indigenous guardianship programs
 - Creek walker programs
 - Conservation officers
 - Higher penalties for violators
- **Salmon values:** The many, and sometimes competing, values of salmon were highlighted throughout the engagement period. These include but are not limited to: salmon's ecological importance, non-consumptive wild salmon utilization, salmon for food/social/ceremonial/cultural purposes, and salmon for livelihoods. It will be important for B.C.'s *Wild Salmon Strategy* to acknowledge the multiple values of salmon throughout the province – including both inland and coastal areas. It was repeatedly mentioned how important it will be to ensure that immediate action is pursued, while ensuring that the next generation cares about wild salmon and their well-being, in order for these values to persist into the future. In addition to salmon fishing, alternative economic opportunities related to wild salmon that were noted include restoration activities and ecotourism. It was generally agreed that adding value to salmon in B.C., and for local communities, is crucial and can take various forms. Examples:
 - Diversification, e.g., restoration economy, ecotourism (salmon spawning, snorkeling, bear viewing)
 - Training, mentorship, education, and youth engagement and opportunities
 - Forward-looking vision
 - B.C. holiday/symbol/license plate to recognize wild salmon importance
 - Importance of values from headwaters to estuaries to sea
 - ‘Whole citizen’ effort
 - Ecosystem importance, e.g. southern resident killer whales

- **Fishing:** The importance of various forms of salmon fishing, and other fisheries, to communities around the province was highlighted throughout the engagement period. At the same time, the need to focus on stock rebuilding prior to further expansion of salmon fishing opportunities was also noted. It was suggested that further application of selective fishing methods would be worthwhile. Issues with high-use fishing areas were also noted. Many people spoke about current federal and provincial government jurisdictions as they relate to fisheries. Examples:
 - Innovative financing for community fisheries, e.g., license banks, loan board
 - Gear improvements
 - Improved bycatch monitoring
 - Federal Standing Committee on Fisheries and Oceans' study on regulation of West Coast fisheries
 - Ecosystem impacts, e.g., herring fishery
 - Impacts of catch and release
 - Place-based management
- **Fish farms:** Although not in the WSAC's terms of reference, concerns with marine open-pen salmon farming – such as lighting, disease, sea lice, pesticides, and escapes – were repeatedly raised. The need for incentives and innovation related to transitioning to closed containment or land-based systems was often referenced. At the same time, some stated that salmon farms are not the key culprit in wild salmon declines, and that many other issues must be addressed. Overall, it was suggested that there needs to be more ongoing co-ordination between B.C., Canada and Indigenous communities on fish farms and their impacts on wild salmon. Examples:
 - Incentives for innovation and closed containment
 - Limits to salmon farming in Western U.S. (e.g., Washington, Alaska)
 - Broughton Archipelago government-to-government process, outcomes and next steps
 - Land-based aquaculture challenges and success stories
- **Climate change:** Participants in the engagement period reminded that it will be crucial to carefully consider rising water temperatures, changing ocean conditions, salmon survival and other issues related to climate change during the development and management of a provincial *Wild Salmon Strategy*. Ongoing monitoring and traditional knowledge will both be useful in this regard. Examples:
 - Connections to climate initiatives, e.g., Clean BC
 - Drought and flood events and appropriate management
 - Ongoing effects monitoring
 - Species-specific changes
 - Ocean conditions (temperature, acidification)
- **Indigenous Rights and interests:** Indigenous communities/governments/organizations have a constitutional right to participate in salmon management/benefit, a cultural interest in supporting healthy salmon stocks and considerable technical capacity dedicated to the cause. Ensuring they are central to the future of wild salmon in all respects will be critical to success. Along these lines, it was suggested that a more structured and ongoing relationship between Indigenous communities and the provincial government regarding salmon and fisheries issues will be important to the success of a provincial *Wild Salmon Strategy*. At the same time, it will be important to communicate through established processes where possible – rather than reinventing or duplicating processes – in order to avoid siloes or a duplicative approach to engagement. Examples:
 - United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
 - First Nations Fisheries Council
 - Section 35 Rights, Canadian Constitution
 - Wild Salmon Summit recommendations
 - Draft Principles that Guide the Province of B.C.'s Relationship with Indigenous Peoples
 - Reconciliation
 - Indigenous management and guardianship

The WSAC's recommendations to the Province of B.C.

1. Preamble

As noted earlier in this report, current data suggests that *immediate* intervention is needed to both sustain healthy wild salmon stocks in B.C. and to support the ecological areas and human communities that depend on them. The B.C. government, recognizing the vital importance of abundant wild salmon populations to our environment, culture, and economy appointed the 14-member Wild Salmon Advisory Council (WSAC) in June 2018 to provide advice and guidance to shape a made-in-B.C. *Wild Salmon Strategy*.

Over the past seven months, the WSAC has gathered information through a series of commissioned reports, conducted engagement throughout the province, and held significant internal deliberations. We offer the following recommendations in the belief that they fundamentally support the provincial government's intention on this issue. These recommendations will also be helpful in formulating appropriate and timely actions for both wild salmon and the communities dependent on them for good lives and livelihoods.

Although there is a range of knowledge and interests related to wild salmon amongst WSAC members, our recommendations are premised upon several important shared principles. We heartily agree that a made-in-B.C. *Wild Salmon Strategy* must:

1. Be **action-oriented** with a focus on tangible, achievable, near-term actions that can address the immediate needs of wild salmon and their habitats.
2. Establish **long-term** provincial engagement on this issue, recognizing that impact will require ongoing and significant effort.
3. **Recognize, respect and engage Indigenous governments and communities**, acknowledging their social and cultural relationship to wild salmon, the United Nations Declaration on the Rights of Indigenous Peoples, Section 35 Constitutional Rights, and the numerous court cases¹³ that have affirmed their interest to participate in the management and use of the resource.
4. Incorporate intentional and appropriate **collaboration** with all levels of government, including Indigenous governments, working toward a shared vision and co-ordinating resources and capabilities towards its achievement.
5. **Include action on two key fronts** – supporting wild salmon and their habitats through protection, restoration and enhancement initiatives AND ensuring that benefits flow to B.C. residents, particularly those who live adjacent to the resource.
6. Position the provincial government to play three critical roles – as **champion, leader and strategic investor**.

In addition to these six points on which WSAC members agree are the essential conditions for a successful made-in-B.C. *Wild Salmon Strategy*, our recommendations are framed and reinforced by several shared expectations, which were significantly informed by discourse during the engagement period. These expectations include:

- Requiring that actions be supported by best available science, strong technical support, Indigenous and local knowledge, and a public monitoring/reporting framework. This must include a conscious effort to learn from the past. Billions of dollars have been invested in the issue of wild salmon habitat restoration and wild salmon enhancement over the past 20 years. It is necessary that these lessons be brought forward to inform this new endeavor.

¹³ Court cases include: Delgamuukw, Sparrow, T'silhqot'in, Gladstone, Haines.

- Understanding that strategies often take time to mature and flourish, particularly when they involve complex issues and multiple parties. But in this instance, wild salmon cannot wait for all the stars to align. A successful strategy must therefore include short-term interventions, based on best available evidence and local knowledge, in order to shore-up critical problem areas, demonstrate intent, and engage citizens.
- Accepting that B.C. already has many laws and regulations in its toolbox that could better support wild salmon if they were more consistently applied, monitored and enforced. Doing this requires the intentional development of a new culture inside government where a “wild salmon lens” can inform decision-making and there is a managed requirement that existing tools be applied.
- Acknowledging that the fisheries file inside the provincial government has been dispersed across multiple agencies and programs for the past several years, which has often created confusion and duplication. This has affected the Province’s ability to champion both wild salmon issues and economic issues related to the uses of the resource. There are demonstrable advantages to aligning the organization’s fisheries capacities, resources and knowledge.
- Recognizing that the locus of action for a made-in-B.C. *Wild Salmon Strategy* must be at the community level. There is considerable, experienced capacity already organized and ready for quick activation throughout B.C., including in Indigenous communities and organizations. Taking advantage of this “infrastructure for action” by supporting community stewardship will allow for a much more efficient launch and ensure that priority issues are identified and addressed.
- Affirming that a made-In-B.C. *Wild Salmon Strategy* must include consideration for both coastal and Interior issues and interests. The Interior regions of the province provide critical spawning habitats for wild salmon, steelhead and other salmonids and are home to multiple communities, cultures and businesses that are reliant on healthy stocks. During the engagement period, WSAC members were reminded that the strategy would be incomplete and inaccurate if it did not keep the needs and issues of Interior communities and environments top-of-mind.
- Ensuring that the made-in-B.C. *Wild Salmon Strategy* addresses all seven species of Pacific salmon in the province. Each is important for different reasons to different jurisdictions.
- Recognizing that the engagement period included many presentations that expressed concern about the risk to wild salmon imposed by B.C.’s finfish aquaculture industry. The WSAC encourages the provincial government to actively implement the recommendations provided to government by the B.C. Ministry of Agriculture’s Advisory Council on Finfish Aquaculture¹⁴ with respect to current and future finfish aquaculture facilities on our coast.
- Committing to a strategy that helps ensure B.C.’s wild salmon and other fisheries are structured to achieve maximum benefits for the communities adjacent to them. At this point in history this statement may seem simply aspirational to some, but our recommendations strive to demonstrate how the Province could help to realize a future where fishery resources in B.C. are more immediately tied to local economic opportunities.
- Acknowledging that climate change is a critical factor impacting wild salmon now and any plans made to support them over the coming decades. These impacts are likely to continue to include increased flooding, drought, washout events, wildfire impacts, higher water temperatures and invasive species, among others. This requires that B.C. develop an approach to wild salmon habitat protection, restoration, and enhancement that is flexible and invests in ongoing monitoring for rapid response.

Council members heard loudly and clearly during the engagement period that the current weakened state of wild salmon and steelhead in many parts of B.C. is the cumulative effect of “death by a thousand cuts” inflicted over the past decades. This makes the task of supporting their renewal both complex and critical. B.C. citizens have made it clear to the WSAC that the provincial government’s stated intent to take action on wild salmon is crucial because,

¹⁴ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/fisheries-and-aquaculture/minister-or-agriculture-s-advisory-council-on-finish-aquaculture/maacfa-2017-docs/minister_of_agricultures_advisory_council_on_finish_aquaculture_final_report_and_appendices.pdf

while our futures may not wholly depend on wild salmon, our province will be very much diminished, both in ways we can expect and in ways we cannot yet envision if they are gone.

2. Recommendations

Immediate Actions direct B.C.'s attention toward strategic interventions to stem the tide of further declines in our wild salmon populations and the economies that depend on healthy and abundant stocks. We advise that they be undertaken immediately using best-available science and current knowledge.

Mid-Term Actions recognize that more research, planning, organizing or convening may be required to achieve them but they are critical to include in the strategy and work should commence on them as soon as possible.

GOAL 1: Increase the abundance of wild salmon

Despite billions of dollars of public and private investment over the past 30 years to protect, restore, enhance and manage B.C.'s wild salmon and steelhead resources, both the statistics and the stories indicate that many these populations continue to weaken – some at alarming rates. This raises serious issues for other species that rely on wild salmon, including southern resident killer whales, for the overall health of the ecosystem and for the individuals and communities that rely on wild salmon for their lives and livelihoods. In the face of ongoing pressures from development and changing climate conditions, it is imperative that the Province act quickly to (a) protect salmon habitats not yet disturbed; (b) restore habitats that have been degraded; and (c) prioritize and enhance wild salmon populations where there is a threat of extirpation or well-being at risk. These recommendations direct the government to priority actions that will increase wild salmon abundance in B.C.

Strategy 1.1 Protect salmonid habitats, including water¹⁵, from loss or degradation by actively enforcing existing provincial laws and regulations. Loss of fish habitat has been identified as a leading factor in the decline of Canada's fisheries resources, and salmon in particular¹⁶.

- **Immediately:** Demonstrate the active use and intentional enforcement of existing provincial laws, regulations, policies and programs for the protection of wild salmon spawning and rearing habitats.
- **Immediately:** Provide support to provincial organizations that are working to protect habitats.
- **Mid-Term:** Instruct agencies to use a "wild salmon lens" in relevant provincial land-use decisions related to the use of all Crown lands/watercourses/estuaries (including those leased to industrial uses) so that wild salmon receive greater and more consistent consideration in decision-making. This updated approach should be demonstrated in the government's accountability and reporting frameworks.
- **Mid-Term:** Work closely with municipal and regional governments to ensure their land use decisions are compliant with provincial laws. This could include establishing a regular process of reporting on salmon-related decisions and actions.

¹⁵ Water regulations include water quality, quantity, temperature, dams, flood control barriers, water licencing including for agriculture and industry.

¹⁶ See, e.g., J.A. Lichatowich, *Salmon Without Rivers: A History of the Pacific Salmon Crisis* (Island Press, 1999); Marvin Rosenau and Mark Angelo, *Conflicts Between Agriculture and Salmon in the Eastern Fraser Valley* (Pacific Fisheries Resource Conservation Council, 2005).

Strategy 1.2 Develop new laws and regulations where existing laws and regulations are shown to be insufficient to adequately protect salmonid habitats, including the assurance of sufficient water quality and quantity to enable successful migration, spawning and rearing of all salmonids.

- **Immediately:** Develop and implement a provincial no-net-loss or habitat compensation policy for any development disturbance of salmonid habitats. Fisheries and Oceans Canada offers one example of this type of policy framework for consideration¹⁷.
- **Immediately:** Pay particular attention to industry and land-use activities including forestry, road construction, mining and agriculture which have been shown to have significant interaction with wild salmon habitats and potentially deleterious impacts. WSAC members received many submissions urging a review of environmental regulations and policies for these activities.
- **Mid-Term:** Review the existing suite of laws/regulations in place to support salmonids, including how these laws/regulations are currently applied, monitored and enforced. This review should include an assessment of how/whether important protection and restoration initiatives are impeded by the current fractured nature of salmon management within the provincial government system. This review could be used to guide the strengthening of existing laws/regulations, the creation of new laws/regulations, and the re-organization of government departments, as needed.
- **Mid-Term:** In consultation with Indigenous governments and other levels of government, develop a long-range and strategic plan to ensure that key salmon habitats are protected in perpetuity¹⁸. This can be achieved by using tools/mechanisms currently available to the Province (including conservancy legislation, co-management structures, land trusts, land purchases, parks and protected area legislation, marine protected area legislation), or through the introduction of new legislation or regulation. This action can also support the provincial government's reconciliation objectives given its Draft Principles that Guide the Province of B.C.'s relationship with Indigenous peoples¹⁹.

Strategy 1.3 Increase monitoring and enforcement efforts for salmonid habitats across B.C.'s watershed and nearshore environments.

- **Immediately:** Invest to enhance both human and financial capacity related to habitat monitoring, enforcement and infraction prosecution, for habitat disturbances including terrestrial, near shore and freshwater. Working closely with Indigenous governments and community organizations to support these efforts is important. Training and investment in guardianship programs (both existing and new) can help put more boots on the-ground for this effort. The WSAC also recognizes and supports current efforts within government to review and revise its Professional Reliance Model as part of the efforts to ensure laws and regulations are being systematically and accurately enforced.
- **Mid-Term:** Increase transfer funding to bylaw enforcement efforts at the regional and municipal levels. Ensure that this increased funding is accompanied by a publically available accountability and reporting framework.
- **Mid-Term:** Work with all levels of government and stakeholder groups to ensure that the monitoring of all fisheries (particularly counting the number of fish caught) is improved.

¹⁷ *Practitioners Guide to Habitat Compensation*, Fisheries and Oceans Canada, 2002. Compensation is defined in the Habitat Policy as: "The replacement of natural habitat, increase in the productivity of existing habitat, or maintenance of fish production by artificial means in circumstances dictated by social and economic conditions, where mitigation techniques and other measures are inadequate to maintain habitats." This policy includes a hierarchy of compensation options where habitats are in danger of disturbance.

¹⁸ WSAC members heard that priority areas, such as the lower Fraser River and key estuarine habitats, should be prioritized for these efforts.

¹⁹ https://news.gov.bc.ca/files/6118_Reconciliation_Ten_Principles_Final_Draft.pdf?platform=hootsuite

Strategy 1.4 Invest in the restoration of critical salmonid habitats that have been lost or degraded.

- **Immediately:** Focus enabling resources on shovel-ready initiatives that have been identified and prioritized because of their importance to weakened stocks, species at risk and community economies and well-being²⁰. Some examples that came to the WSAC's attention during the engagement process include:
 - The Province's Fish Passage Remediation Program, which has a long list of potential projects to remove key fish passage barriers. Although these have been costed and prioritized by the technical working group, resources to complete the recommended work have been limited.
 - The Connected Waters initiative²¹, which has a plan on the Lower Fraser to connect waterways impacted by flood control measures. The initiative brings together technical, community and Indigenous partners and would open hundreds of kilometres of watercourses for wild salmon spawning and rearing if resources were available for technical design and engineering work.
 - The Pacific Salmon Foundation has a list of projects throughout the province that it deems could have immediate benefits to key wild salmon runs.
- **Immediately:** Invest the technical and financial resources necessary to support existing initiatives driven by community and Indigenous organizations. Many of these projects are high profile and important to local communities and resource users, and as such could help raise public commitment for the government's objectives and help build community stewardship.
- **Immediate to Mid-Term:** Focus on tools to support the control, prevention and eradication of invasive species in inland lakes and waterways.
- **Immediate to Mid-Term:** Engage with Washington State to learn from its habitat restoration efforts and ensure co-ordinated actions wherever possible for southern resident killer whales and transboundary salmonid migration.
- **Mid-Term:** In collaboration with communities, Indigenous governments, technical experts and stakeholders, establish and implement a long-term strategic restoration plan with clear objectives and a sustainable approach to investment. This plan should clearly identify the habitat-based limiting factors for salmon populations and use these as the foundation for designing the most efficient and cost-effective remedial actions possible. Prioritizing actions that help achieve the Province's vision for restoring healthy stocks in B.C., and supporting stewardship and economic development in communities should inform the development of the habitat restoration strategy. To yield maximum results, it will be necessary to ensure that provincial priorities, activities and expenditures are aligned and co-ordinated with the federal government and Indigenous governments by establishing mechanisms for joint-planning and resource sharing.

²⁰ Establishing the metrics against which the merits of each initiative can be assessed/prioritized will be important to this endeavor. Some considerations include: benefit for COSEWIC-listed species; to commercial and recreational fisheries; to orca recovery; to the FSC food fishery; to existing small business viability; to employment opportunities; to new economic opportunities.

²¹ <https://www.watershed-watch.org/campaigns/connected-waters/>

Strategy 1.5 Invest in and support salmon enhancement activities that are strategic and science-based.

- **Immediately:** Identify opportunities through the federal Community Economic Development Program (CEDP) and the Public Involvement Program (PIP) to support and invest in salmon enhancement efforts including small-scale hatchery production where these enhancement efforts are being strategically used to rebuild weak or extirpated stocks; for captive brood stock programs; for public engagement/stewardship development; or for short-term interventions to help rebuild stocks for southern resident killer whales. Communities and Indigenous governments should be involved in the design and decision-making process for these opportunities. The strategy could include the redeployment of underutilized capacity. Investment should prioritize the most urgent needs such as Thompson River steelhead.
- **Immediate to Mid-Term:** Pinniped (seal and sea lion) populations have grown considerably stronger over the past several years and are increasingly reported to be preying on wild salmon, particularly in estuaries where log debris provides haul-out habitat. The WSAC recommends engaging with the science and conservation communities to review/confirm current and trends data, and to develop appropriate and timely interventions where pinniped populations or problem animals are threatening wild salmon rebuilding efforts.
- **Mid-Term:** Attach to all enhancement efforts a deliberate and long-term monitoring framework for impact measurement, including the monitoring of climate change impacts over time that may demand course correction.

GOAL 2: Protect and enhance the economic, social and cultural benefits that accrue to B.C. communities from wild salmon and other fisheries, placing emphasis on adjacent communities.

Wild salmon have a critical role to play in healthy ecosystems and communities. The *Wild Salmon Strategy* should aim to embody both the tangible and intangible benefits provided to B.C.'s natural systems and human communities when stocks are healthy and abundant. This requires a remediation strategy that considers: (a) other species, such as orcas, eagles and bears that depend on wild salmon as a key food source; (b) Indigenous peoples and fishing communities that have strong cultural roots linked to wild salmon; and (c) economic relationships to wild salmon, including harvesters, processors, tourism and other businesses. It is concerning that in spite of the fact that the value of wild seafood in the North American marketplace has been steadily increasing over the past two decades, average commercial fishing incomes in B.C. have declined, many recreational and commercial fishing enterprises struggle for viability, and many ancillary businesses that rely on wild salmon and other fisheries have closed. These impacts are most immediately felt at the community level, often in communities that are adjacent to where the fish are caught. The Province, with its jurisdictional authority for labour-force development, communities, food/seafood processing and education/training is in a unique position to ensure that the *Wild Salmon Strategy* is supported by a comprehensive and intentional strategy to maximize the benefits of B.C. fisheries and seafood for the people of B.C. These recommendations aim to ensure that this vision is realized.

Strategy 2.1: Elevate discussions and decisions about using strategic enhancement opportunities to stabilize the commercial and recreational fishing industries in B.C.

- **Immediately:** Invest in a regional salmon development conference to learn from Alaskan representatives and to dialogue with Indigenous governments, fish harvesters, communities, NGO's and scientists about the potential for structuring and operating production hatcheries in association with terminal fisheries to provide economic opportunity to fish harvesters in a manner that does not jeopardize wild salmon stocks. This would require collaboration with the federal government and could eventually involve the development of enabling legislation.

Strategy 2.2: Develop and implement a strategic employment plan to include training, mentoring and job creation that is linked to the activities undertaken through the *Wild Salmon Strategy*. Wherever possible, focus new opportunities in Indigenous, coastal and interior communities dependent on wild salmon and fisheries resources.

- **Mid-Term:** Recognize the potential of the environmental management sector by investing in a co-ordinated approach to skills training, apprenticeships, mentoring, education and job creation that links wild salmon recovery efforts to new economic opportunities. This could include: extending the reach of Indigenous guardianship programs; funding curriculum development for salmon habitat restoration, including field studies; developing hands-on apprenticeship and trades programs, including certification; and designing a jobs bank to encourage jobs/skills matching. As part of this work, which has the potential to create an exciting new employment sector in the province (sometimes called a restoration economy), it will be important for the Province to consider ways to support long-term employment.
- **Mid-Term:** Invest in innovation to support initiatives related to wild salmon recovery. This might include encouraging the development of new technologies for stock assessment, monitoring, habitat assessment, habitat restoration, data collection/storage/sharing, or enhancement.
- **Mid-Term:** Recognizing the increasing crisis in the commercial fisheries labour force, including an aging fleet and the lack of new entrants, research and develop a strategy to rebuild the local labour force for this sector.
- **Mid-Term:** Recognizing that rural communities are at risk of losing much of their labour force capacity as employment in the fish processing sector becomes more urbanized, realizing a strategy to return economic opportunity to rural and Indigenous communities adjacent to the fisheries resource requires investment in labour force development linked to job creation. It also involves strategic investment in local processing facilities to support innovation, skills training and market development.

Strategy 2.3: Enhance local social, cultural and economic benefits from B.C. fisheries for adjacent communities and their active commercial and recreational fishers, including both tidal and freshwater anglers.

- **Immediately:** Establish a comprehensive provincial vision and strategy for B.C. fisheries that acknowledges adjacency principles and reflects the values and objectives of British Columbians. Engage Indigenous governments, recreational and commercial fishers, and coastal and inland fishing communities in developing this vision.
 - For example, the Federal Standing Committee on Fisheries and Oceans is presently studying (Feb 2019) the regulation of West Coast fisheries. B.C. should immediately and directly engage and collaborate with the Standing Committee and present B.C.'s position and commitment to realize improved economic, cultural and social outcomes for B.C. fish harvesters and communities. This could include: policies and regulations similar to those developed in other regions in Canada, and in the federal Bill C68 to protect and enhance community benefits from commercial fisheries.

- B.C.'s position should include similar objectives as in Atlantic Canada's PIIFCAF²², such as:
 - The importance of maintaining an independent and economically viable fleet;
 - Preventing and, over time, eliminating corporate and foreign control of licenses and quota so that active fishers retain control of their fishing enterprises;
 - Ensuring that the benefits of fishing flow to the active fish harvester and to communities;
 - Over time, landed value retained exclusively by harvesters and not by others.
- **Mid-Term:** Build a regulatory environment that supports democratic representation for active fish harvesters to allow their interests as working fishers, in relation to the fishery are fairly and accurately represented. Other provinces' legislation in this area²³ can provide guidance.
- **Mid-Term:** Consider investing in programs such as communal quota, fish harvester loan boards, and communal licence banks that aim to support the viability of community fishing enterprises and active fish harvesters.

Strategy 2.4: Encourage economic activity adjacent to fishing grounds to benefit coastal and rural fishing communities, Indigenous peoples, shore workers and ancillary businesses. Relevant provincial areas of jurisdiction include labour, fish processing licencing and regulation, community and rural economic development, innovation and governance.

- **Immediate to Mid-Term:** In consultation with impacted communities and workers, build a provincial regulatory environment that supports local processing of adjacent fisheries resources. Policy development could include:
 - Legislation and regulation to support and provide incentives for more fish processing in communities adjacent to the resource, including in the Interior, and to create disincentives for off-shore processing.
 - Tax incentives and innovation awards to encourage research and development into value-added options to increase local processing and to encourage the development of community infrastructure, such as cold storages and offal disposal technology.
 - Processing licenses linked to domestic processing capacity and to adjacency, giving preference to those who invest in the province and the fishery, to encourage the flow of returns to those who invest in on-shore processing capacity.
 - Protection of the B.C. Groundfish Development Quota (GDQ) that provides communities control of 10% of the total groundfish quota of all species, and the alignment of this quota with companies who process groundfish in B.C. communities. This is a mechanism that may also be relevant to other fisheries.

²² PIIFCAF (policy on Preserving the Independence of the Inshore Fleet in Canada's Atlantic Fisheries). <http://www.dfo-mpo.gc.ca/fm-gp/initiatives/piifcaf-pifpcca/note-bulletin-eng.htm>

²³ <https://nslegislature.ca/sites/default/files/legc/statutes/fish%20harvester%20organizations%20support.pdf>

Strategy 2.5: Leverage the weight of existing marketing and branding programs in B.C. and Canada to raise the value and profile of wild salmon and seafood products from B.C.

- **Immediately:** Develop a wild salmon logo to increase interest and awareness. B.C. has already adopted the salmon as a provincial symbol. A logo would complement this decision.
- **Immediately:** Review the terms of reference for the BC Salmon Marketing Council to ensure that this organization is positioned to deliver on the government's *Wild Salmon Strategy*.
- **Mid-Term:** Use existing market development mechanisms supported by the B.C. government including Buy BC, Eat Drink Local, and the BC Food Innovation Network to promote B.C. seafood and to prioritize seafood that trace products back to their points of origin. Consider opportunities and mechanisms to build local and provincial markets for B.C.-caught seafood.

Strategy 2.6: Support fisheries-related eco-tourism opportunities in B.C.

- **Immediately:** Enhance support to existing fishing tourism promotion and marketing initiatives such as Fishing BC²⁴. Focus on both fishing and fishery-related marine and inland tourism development opportunities and consider express ways to support Indigenous efforts in this sector of the economy. Support efforts to highlight conservation with respect to wild salmon, particularly during this rebuilding effort. Diversification and community economic development opportunities through new ecotourism opportunities should also be considered.
- **Mid-Term:** Enhance the Fisheries and Aquaculture Sector Report prepared by BC Stats to include a more comprehensive analysis of local economic benefits provided by the recreational fishing sector.

GOAL 3: Develop mechanisms, processes, practices and structures to engage citizens and governments in the effective stewardship and management of B.C.'s wild salmon.

The realization of a comprehensive set of actions to increase the abundance of wild salmon in B.C. and ensure that the value of our fisheries is maximized to benefit B.C.'s economy requires focused capacity inside government, well-developed and intentional relationships with other levels of government, and the support of communities that are the front-line stewards of this resource. These recommendations are aimed at creating the environment for success.

Strategy 3.1: Develop focused and co-ordinated leadership capacity in government to champion and deliver on the wild salmon and economic development recovery efforts.

- **Immediately:** Establish an internal mechanism – an inaugural team or ombudsman to co-ordinate the immediate actions for the *Wild Salmon Strategy*, and to support the development of a lead agency for B.C. fisheries that clearly delineates and supports wild salmon and B.C. fisheries. Wild salmon need a clearly delineated home inside the provincial government structures, especially insofar as urgent action is required on multiple fronts. The current decentralized system creates a fractured voice for wild salmon issues at a time when a singular voice is necessary.
- **Immediately:** Engage Indigenous governments in the development of the *Wild Salmon Strategy* to ensure their interests, capabilities and legal position are represented and well-utilized.

²⁴ <http://fishingbc.com/>

- **Mid-Term:** Establish an external monitoring and reporting mechanism to ensure the actions committed to by government within the *Wild Salmon Strategy* are implemented. This could include reconstituting a group, such as the Wild Salmon Advisory Council for an annual progress review.

Strategy 3.2: Actively engage existing community stewardship groups and Indigenous governments.

- **Immediately:** Support existing organizing and delivery capacity at the community level throughout B.C. to ensure substantive early action on *Wild Salmon Strategy* priorities. Salmon round-tables, local stewardship groups, watershed councils, Indigenous organizations and other organizations are present in communities throughout B.C. and are poised to support the province's wild salmon initiative. Where capacity does not exist or is nascent, invest in bringing stakeholders together to develop delivery capability.
- **Immediately:** Formally recognize the importance of Indigenous organizations and First Nations in the task of rebuilding wild salmon in B.C., along with their constitutionally-protected Right to participate in and benefit from the management of this resource. Include them from the outset in the development of the strategy to ensure their perspectives guide the work ahead.

Conclusion

Creating a made-in-B.C. *Wild Salmon Strategy* at this juncture, when the threats to our wild salmon populations are so complex, requires an urgent and strategic intervention. The Wild Salmon Advisory Council confirmed through its work, including the engagement process, that there ARE solutions and there IS public interest/endorsement for this initiative.

We heard at multiple times, and in many ways, that increasing wild salmon abundance is and should be a provincial government goal. We also heard repeatedly that the citizens of B.C., and particularly adjacent communities, must benefit directly from the public investment that will be required.

The WSAC's recommendations recognize this duality, encourage the Province to take a leadership role on this issue, and offer guidance for both immediate and mid-term actions.

A made-in-B.C. *Wild Salmon Strategy* is long overdue.

