

Introduction

This Technical Brief provides a recap of the 2013 -2018 Chinook Strategic Planning Initiative (process and outcomes), key developments since that work, and commentary on its continuing relevance/utility to support collaborative work on Fraser Chinook recovery and rebuilding.

This is part of work by Fraser Salmon Management Council's Chinook Recovery & Rebuilding Initiative (CRRI), whose goal is to support a strong leadership role for First Nations in collaborative technical work to develop and implement Fraser Chinook recovery and rebuilding initiatives. The brief is organized in three sections and is being shared in draft to invite additional input before it is finalized in March 2024.

- Part 1: CSPI process and report overview.
- Part 2: Updates: Key developments relevant to Fraser Chinook management since 2018
- Part 3: Lessons learned: What lessons from both the CSPI process and outputs have continuing relevance in the current context and how best can those be utilized going forward?.

Part 1: CSPI Process and Outputs

AT A GLANCE: The Southern BC Chinook Strategic Planning Initiative (CSPI)

- **Governance:** Tier 2 planning process led by DFO and the Fraser River Aboriginal Fisheries Secretariat (FRAFS), with participation of other fishery sectors.
 - Guidance by the CSPI Steering and Planning Committee (SPC) and support from a Technical Working Group (TWG)
- Project support: ESSA facilitated and coordinated the work and project reporting.
- Goal: An integrated strategic plan to address declines of Southern BC Chinook.
- Timeline: 2013-2018.
- Approach: Structured decision-making framework to define objectives, performance measures, indicators and to start exploring management strategies.
- Results: SPC/TWG model seen as a successful experiment in multi-interest collaboration under the Wild Salmon Policy. While the draft plan was never finalized, it achieved consensus on many issues and increased mutual understanding of where perspectives diverged. TWG developed scientific tools to support quantitative evaluation of management options. Project reports include:
 - Southern BC Chinook Strategic Planning Initiative | Integrated Strategic Plan for Southern BC Chinook (Working Draft #9, August 2018)
 - CSPI Summary of Strategic Plan | Extended Executive Summary (Draft, October 2018).

Summary: Final Draft CSPI report

The final draft report was organized in seven sections, starting with agreed problem and goal statements. It acknowledged a broad pattern of decline across many Southern BC Chinook populations, multiple challenges facing those populations and a highly variable state of knowledge for different populations. The over-arching goal was to restore and maintain the abundance, distribution and diversity of Southern BC Chinook salmon for all that rely on them.

Section 1: Introduction: broader context & plan scope

Key Challenges, including the multiple factors affecting SBC chinook, uncertainty around some populations and the need for a long-term rebuilding strategy if persistently poor survival could not be offset by harvest reductions.

Context, including complex biology and life history, and the complex constitutional and legal context. Cowichan Watershed Health and Chinook Initiative cited as a useful model for multi-stakeholder integrated processes at the watershed scale.

About the Plan: Purpose, audience, goals and objectives, spatial/temporal scale and scope (excludes tactical planning or specific management actions). The intent was that the plan would offer guidance and direction to tactical planning at multiple scales.

Section 2: Current state of knowledge: SBC Chinook status, trends.

Assessment: Overview of recent work/tools to assess biological status/trends, assessment units and challenges around defining/estimating wild vs enhanced populations.

Data: Discussion of data available for status assessment, data quality issues — noted that higher quality, quantitative stock-recruit analyses were available for just 2 CUs.

Results: Discussion of declining trends, particularly for stream-type chinook, while CUs with moderate/high enhancement were generally more variable. Notwithstanding similar coast-wide marine survival trends from Oregon through BC and evidence that large-scale processes are influencing Chinook productivity, no single identifiable factor can explain recent patterns for southern BC Chinook at this point in history.

Section 3: Major threats, knowledge gaps (trends, threats, management)

Limiting factors/threats: Summary of substantial threats linked to recent declines (Climate Change, Marine Habitat, Estuarine Habitat, Freshwater Habitat, Harvest, Hatchery Production and Cumulative/Synergistic interactions among threats).

Knowledge gaps, limitations: Summary of key knowledge gaps and assessment monitoring gaps relating to environmental conditions, climate change, enhancement, harvest and cumulative effects.

Section 4: Plan objectives, indicators, performance measures

Proposed hierarchy of objectives (biological, social & economic), from WSP objectives down to examples of potential indicators and performance measures. The plan notes that actual measures would be selected during implementation, as those would need to be modelled/monitored for ongoing strategy evaluation.

Section 5: Strategies to address objectives, threats, knowledge gaps

This key section outlines proposed strategies to achieve the SPC objectives, address identified threats and knowledge gaps.

Process Strategies: Provide direction for implementing the overall strategic plan and individual substantive strategies. They encompass communication, information, collaboration and assessing the effectiveness of actions.

Learning and Action Strategies: Provide direction for management actions or research activities within particular focal domains, including marine habitat/ecosystem, freshwater habitat, significant projects and/or incremental/cumulative development, hatchery production/hatchery-based indicator stocks, harvest, climate change and additional assessment monitoring.

This section also offers guidance on key points to consider in interpreting the list of proposed strategies, details and expected benefits of proposed strategies, and the importance of an Adaptive Management (AM) framework

Section 6: Strategic plan implementation

While Section 5 offers a logical sequence of tasks that create a foundation for implementation, Section 6 outlines a broad 20-year implementation plan, and a more detailed 5-year plan to implement those strategies.

The plan itself clearly outlines (at the strategic level) what would be needed to make progress in recovering Chinook. That would include widespread understanding of the strategy, commitment to implementation and integration of strategic content across multiple scales, entities and processes.

Acknowledged gaps included an identified entity or governance process to lead implementation and incorporate strategy elements into existing processes and institutions, as well as resources to support implementation.

This section provides examples of organizations, processes, regulations and plans at national, provincial, sub-regional and local levels to address Harvest, Habitat and Hatchery strategies. It recommended maintaining the SPC and TWG structures, which had worked well, until an alternative governance structure was in place to advance the

needed work. It also addressed key elements of successful governance, the importance of champions, funding and addressing capacity as a critical issues.

Section 7: Performance review

This final section reiterates the importance of an Adaptive Management approach, proposing that the TWG (or successor) provide annual progress reports, using identified indicators/performance measures, at an annual open symposium, with intensive 5-year reviews as part of the proposed cycle of adaptive management.

Part 2: Key Updates since CSPI: 2018-2023

Harvest reductions: Some harvest management changes, including ending the former "zoned" management approach, have been made since 2018 to reduce fishing mortality on some Southern BC Chinook populations. This may have stabilized some of the most serious declines but is still too early to draw firm conclusions, given the high variability. Some Southern BC Chinook populations are still not well understood, monitored or counted. This is particularly true for those outside the Fraser River on Vancouver Island and in the Mainland Inlets, which are mixed and fished with Fraser stocks. Given the variability in salmon abundance it may take several generations to detect the effects of some of these changes if at all.

SBC Chinook population trends: While some Fraser Chinook populations appear to have stabilized, continued changes in their habitat due to multiple factors, including significant increase in wildfires, will make it difficult to tease out and detect the efficacy of management actions.

COSEWIC assessments: Of the 16 Fraser Chinook salmon Designable Units (DUs) COSEWIC has assessed 10 as Endangered, 4 as Threatened, 1 as Special Concern and 1 as Not At Risk. DFO was asked to undertake Recovery Potential Assessments for 11 Fraser Chinook DUs, and subsequently for another 4 Fraser and Southern BC Mainland DUs, all assessed as Threatened or Endangered, to inform potential listing under the Species At Risk Act (SARA) and/or development of a recovery strategy.

Technical developments: The Big Bar slide provided an opportunity to increase surveillance of Chinook populations in the upper Fraser watershed and we are learning more about their migration. First Nations are taking an active role in stock assessment and habitat restoration, utilizing new resources for such work in both freshwater and ocean ecosystems. However, without mechanisms to support joint planning, it is currently challenging to coordinate such work and avert the potential for working at cross purposes. A new Fisheries Mortality Index (FMI) based on run reconstruction and and genetic stock ID, while imperfect, is also helping to shed more light on harvest impacts, including where, which fisheries and relative impacts of different fisheries.

FSCMA: The 2019 Fraser Salmon Collaborative Management Agreement introduced a historic new Tier 2 model of collaborative governance for managing Fraser salmon. It established the Fraser Salmon Management Council (FSMC), which currently brings together 76 signatory Fraser and approach First Nations and the joint (Tier 2) Fraser Salmon Management Board (FSMB), which has identified Fraser chinook rebuilding as a top priority for action. While implementation of the new joint management regime has been slow and incremental, the new governance process may be the successor to the successful CSPI Tier 2 collaborative governance model that was identified as critical to supporting implementation of a comprehensive, collaborative and coordinated strategic approach to rebuild Fraser Chinook. Initial steps for FSMB, with the support of its Tier 2 Joint Technical Committee, include trying to better understand fishery impacts and preseason fishery planning to manage such impacts, particularly for Summer 52 Fraser Chinook, using FMI-based analysis and tools. Meanwhile, the Tier 1 FSMC undertook the Chinook Rebuilding & Recovery Initiative (CRRI) pilot project, which is undertaking foundation-building work to support a strong indigenous technical role in long-term collaborative planning/work to rebuild Fraser Chinook populations.

Enhancement: A new focus on Mass Marking/Mark-Selective Fisheries (MM/MSF) poses an additional new challenge to the recovery of some Southern BC Chinook stocks, with particular concern that increased fishing/release mortality will unduly increase risks to some smaller populations. DFO is currently engaging with indigenous and fishery sectors to develop a new management framework for MM/MSF, while piloting a number of new MSFs in Southern BC, which have raised concerns about how they will affect Fraser Chinook stocks of concern. At the same time, a stronger new conservation mandate for SEP hatcheries under the new PSSI (see below) is bringing more focus to conservation and science around wild/hatchery interactions, although full implications of this new policy guidance remain to be seen.

Fish Stock Provisions, FSAR (Fish Stock Assessment Reports): Amendments to the Fisheries Act in 2019 introduced a new legislative framework mandating recovery planning that is potentially far more powerful than DFO's existing Wild Salmon Policy. These new Fish Stock Provisions will require action to support stocks at risk before they reach crisis levels that trigger SARA response. While SARA ostensibly has more teeth, no salmon stocks have ever been listed due to the broader implications of SARA's strict protections for listed stocks). Fish Stock Provisions only apply to prescribed fish stocks, and the process of building this prescribed list is proceeding slowly.

PSSI, BC SRIF: The Pacific Salmon Strategy Initiative and related resources, including BC Salmon Restoration and Innovation Fund (BC SRIF) and new DFO Centres of Excellence, have brought significant new resources and focus to support rebuilding of Pacific salmon stocks, including Southern BC Chinook, both inside and outside of DFO. It's too early to assess results, though some concerns about initial roll-out have included the failure to adopt collaborative approaches and mindsets from the first stages of planning (as opposed to unilateral DFO planning followed by consultation/engagement).

Also, the gap between the CSPI process and full operationalization of a successor under the FSCMA has meant a lack of collaboration and coordination frameworks to ensure that multiple initiatives, players and resources are working effectively, in concert, towards clear, common goals. Other pending initiatives which may be influential moving forward include DFO's new Framework for Aquatic Species at Risk Conservation and the process to establish a Trilateral Accord between Canada, the Province and First Nations supporting broad collaboration on a provincial recovery strategy for Pacific Salmon.

Part 3: Lessons, Recommendations & Next steps

CSPI — both the process/governance model itself and key elements of the final, very detailed draft strategic/implementation plans — still offer valuable guidance for the next steps required to advance collaborative work aimed at long-term Southern BC Chinook rebuilding. The CSPI report serves as a valuable reference document, capturing a lot of good technical work, planning and process lessons, and participants have stressed the wisdom of building on that — not "reinventing the wheel."

Lessons from CSPI about key elements that will be critical to success include:

- Clear agreement on common goals, objectives, strategies, short and long-term action plans to address priority threats and unknowns, including data/monitoring gaps.
 Those outlined by CSPI offer a strong starting point.
- Integrated, conservation-focussed guidance nested within the Wild Salmon Policy framework to guide multiple players at multiple levels involved in hatchery, harvest and habitat program management and initiatives. The required guidance seeks to inform and empower action at many levels, showing the players where their work fits in and how it can best advance both overall goals and local priorities.
- A full migratory/life history scale framework consistent with the array of highly complex human and natural factors that provide the context for SBC Chinook recovery and rebuilding.
- A strong, inclusive governance framework that brings all players together to coordinate and collaborate on the necessary work. A strong Tier 2 governance model that honours Canada's UNDRIP and Reconciliation commitments is key. Meaningful collaboration mindsets and mechanisms must be employed starting at initial planning stages, not with implementation. Legacy planning models that invite partners to consult on or help implement pre-made plans will not work in a complex, decentralized long-term endeavour that requires full commitment and cooperation amongst a multitude of players.
- Tools to support both technical coordination and decentralized planning and implementation are needed to help actors plan effective actions and focus available re-

sources and capacity where they can make a real difference, while ensuring that "everyone's paddling together in the same direction."

- All elements of planning and implementation guidance designed to support an adaptive management framework, ongoing monitoring and assessment, iterative review and adjustments.
- The above initial thoughts are just a start. What other concluding insights should we include here on key lessons from CSPI and recommended next steps to build on those (e.g. re governance models/needs, resources/capacity, sustainable design to ensure mechanisms will remain resilient and functional over the long term)? What role can FSMC, FSMB and the new CMA play at the Fraser watershed scale? What else?)