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Salmon Aquaculture Transition Plan for British Columbia

September 2024



Government
of Canada

Gouvernement
du Canada

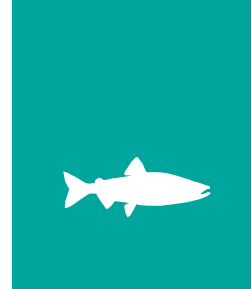
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Table of contents

SALMON AQUACULTURE TRANSITION	1
A Collaborative Approach	3
THE APPROACH	4
What Are We Doing	4
How Will We Get There	5
THEME 1: Support for First Nations, workers, and communities in this transition	7
THEME 2: Identifying economic supports for the adoption of innovative and clean aquaculture technology	9
THEME 3: Milestones, principles, and criteria for the phase down of salmon open net-pen aquaculture . . .	12
THEME 4: Management of open net-pen salmon aquaculture until the ban is fully implemented	14
CONCLUSION	16
DISCUSSION QUESTIONS	17

Salmon Aquaculture Transition



The Government of Canada's **Salmon Aquaculture Transition Plan for British Columbia** lays out a responsible approach to transform the marine salmon aquaculture sector in B.C., while working with First Nations, workers, communities, and Canadians throughout the transition.

This Plan outlines a path forward in four key areas

Support for First Nations, workers, and communities through this transition

Identifying economic supports for the adoption of innovative and clean aquaculture technology

Milestones, principles, and criteria for the phase down of salmon open net-pen aquaculture

Management of open net-pen salmon aquaculture until the ban is fully implemented

This *Salmon Aquaculture Transition Plan for British Columbia (B.C.)* lays out the next steps toward a future sustainable, innovative, and thriving aquaculture sector for B.C. The Plan provides a basis for engagement with coastal communities, stakeholders, and First Nations on the transition to closed containment and other innovative aquaculture technology adoption, while collaboratively fostering development of the aquaculture sector — creating jobs, and safeguarding the environment for future generations. The Plan aims to

enhance food security for Canadians by promoting the production of healthy, nutritious and local food through the use of innovative and clean technologies that generate new business opportunities for Canadians. Innovation, coupled with traditional knowledge and practices, will need to be supported by strategic interventions from all levels of government working together. This will foster the growth and development of a sustainable and innovative aquaculture sector while supporting coastal communities and First Nations.

First Nations are at the core of this transition

First Nations place significant cultural importance on wild Pacific salmon and its linkages to environmental health. First Nations also highlight the need to support their rights to make decisions associated with development in their territories and to benefit from natural resource use. With respect to the Transition Plan, First Nations are united in their concerns about potential negative economic impacts on Indigenous communities and business owners as the sector transitions away from open net-pen technologies, and stress the importance of ensuring that the Transition Plan provides for collaboration, engagement and opportunities for First Nations to develop approaches that address their unique circumstances within the framework of the broader intergovernmental approach to transition.

The Transition Plan is about protecting ecosystems and wild Pacific salmon

It builds upon and nests within a broad framework of collaborative efforts to conserve and rebuild wild Pacific salmon populations. Over the past five years, the Government of Canada has invested \$686M in the Pacific Salmon Strategy Initiative. This year, a historic *Trilateral Declaration and Accord to Address the Decline of Wild Pacific Salmon* was signed,

committing federal, provincial, and First Nations governments to work together on joint efforts related to wild salmon.

The Transition Plan approach brings together many perspectives and authorities to ensure and facilitate success

The transition for the salmon aquaculture sector and the broader marine economy in coastal B.C. requires all governments to work together to support First Nations and coastal communities in B.C. The Government of Canada will provide a venue for collaborative dialogue and engagement to ensure that the transition is successful.

This Transition Plan represents a transformative shift from the status quo

Continued engagement will inform the Transition Plan implementation and provide opportunities for those most impacted by the transition to shape what is needed to achieve success. Through collaboration, the Government of Canada is optimistic that innovation and dedication to environmental values will facilitate a responsible and successful transition. The Transition Plan will honour cultural values, uphold rights, mitigate economic risks, and embrace collaborative solutions. It paves the way for a transition that benefits all — both present and future generations.

A COLLABORATIVE APPROACH

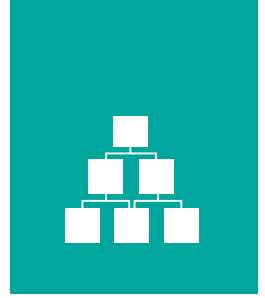
As part of a whole government approach to this Plan, multiple government departments and agencies will play key roles. Consultation and engagement will be led by an interdepartmental task force, comprised of expertise from across the Government of Canada in reconciliation, economic and community development, green technology, innovation, and aquaculture management.

The Government of British Columbia will be invited to collaborate with the federal government and participate in a joint Federal-Provincial working group to review and expedite requests for new licences. First Nations will be supported in their engagement, allowing them to articulate and customize the way in which they interact with the overarching Transition Plan, based on their unique situations and experience.

Coastal communities will be engaged to discuss their participation in the whole-of-government response.

Implementation of the Transition Plan will be cooperative, collaborative, and will ensure that all governments come together to provide strong supports for measures as outlined herein.





The Approach

On June 19, 2024, the Government of Canada released a [Policy Statement \(statement\)](#) on the future of open net-pen salmon farming in B.C. The statement commits to the implementation of a ban on open net-pen salmon aquaculture in B.C. coastal waters by June 30, 2029. Effective immediately, it requires that new salmon aquaculture licences utilize closed containment technology.

This Transition Plan outlines next steps in the development of a responsible approach to support the transition from open net-pen salmon aquaculture to more sustainable and innovative approaches, a response which will encourage collaboration and partnerships

to support long term sustainable economic opportunities in B.C. coastal communities.

WHAT ARE WE DOING

The Transition Plan has four themes:

- [Support for First Nations, workers, and communities](#) in this transition;
- Identifying economic supports for the adoption of [innovative and clean aquaculture technology](#);
- [Milestones, principles, and criteria](#) for the phase down of open net-pen salmon aquaculture; and
- [Management of open net-pen salmon aquaculture](#) until the ban is fully implemented.

Mandate Commitment (2019 and 2021)

The Minister of Fisheries, Oceans, and the Canadian Coast Guard will work with the province of British Columbia and Indigenous communities on a responsible plan to transition from open net-pen salmon farming in coastal British Columbia waters by 2025.

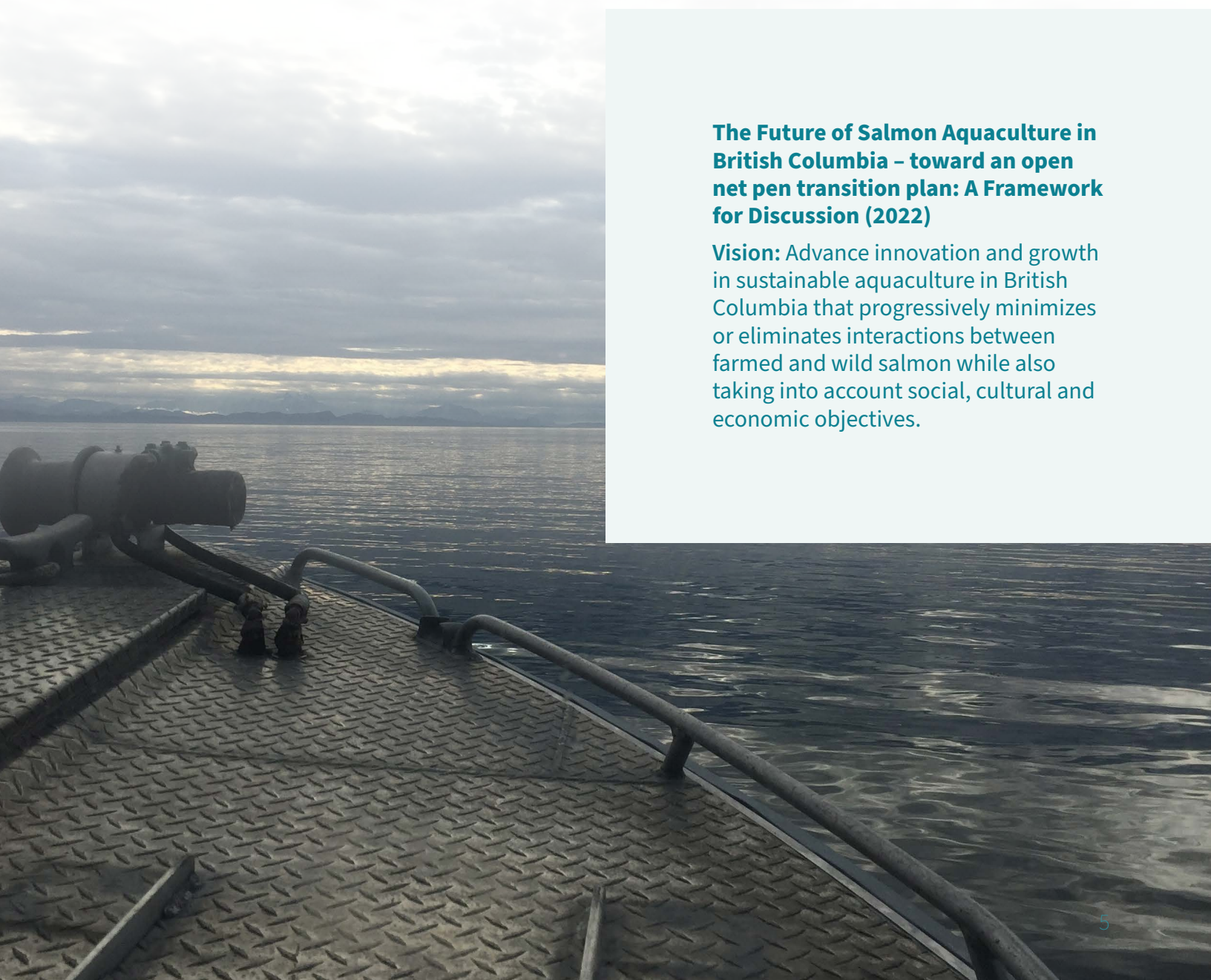
HOW WILL WE GET THERE

Transition will be achieved through collaboration amongst federal, provincial, municipal and First Nations' governments acting together. Collectively, governments, impacted British Columbians, and First Nations in

particular, will consider what supports are required for a responsible transition. This approach will enable coastal communities to plan for a successful transition and will allow First Nations to develop, tailor and implement unique transition approaches.

The Future of Salmon Aquaculture in British Columbia – toward an open net pen transition plan: A Framework for Discussion (2022)

Vision: Advance innovation and growth in sustainable aquaculture in British Columbia that progressively minimizes or eliminates interactions between farmed and wild salmon while also taking into account social, cultural and economic objectives.



Provincial authorities related to aquaculture

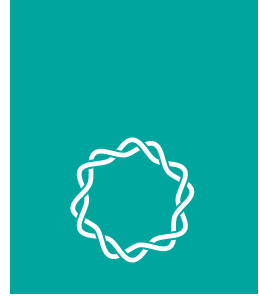
There are numerous **provincial** authorities related to aquaculture, some of which are in part shared. Provincial authorities include but are not limited to:

- Authorizing the occupation and use of Crown land (through tenures) for aquaculture and ancillary purpose under the *Lands Act*. A responsibility for ensuring tenure holders are compliant with tenure agreements, which includes removal of all improvements upon termination, and that the land is restored to a safe, clean, and sanitary condition
 - Responsibilities related to freshwater intake under the *Water Sustainability Act*
 - Licensing of marine plant culture and wild harvest under the *Fish and Seafood Act*
 - Permitting for pesticide use under the *Integrated Pest Management Act*
 - Responsibilities for welfare of cultivated fish under B.C.'s *Prevention of Cruelty to Animals Act* with enforcement authorities designated to the BC Society for the Prevention of Cruelty to Animals (BC SPCA)
 - Specific responsibilities related to effluent discharge from processing facilities or land-based aquaculture under the *Environmental Management Act* through the *Land-Based Finfish Waste Control Regulation* and the *Waste Discharge Regulation*
 - Providing guidance related to land-based disposal of wastes, including mortalities, under the *Environmental Management Act*
-

Federal authorities related to aquaculture

There are numerous **federal** authorities related to aquaculture, including but not limited to:

- Issuing licences for aquaculture (including prescribed mitigations) under the *Pacific Aquaculture Regulations*
- Responsibility for the protection of fish and fish habitat under the *Fisheries Act*
- Tracking presence of reportable and notifiable diseases under the *Health of Animals Act*, the *Health of Animals Regulations and Reportable Diseases Regulations*
- Authorizing the movement of live fish under the *Fishery (general) Regulations*
- Responsibilities related to the deposit of deleterious substances under the *Fisheries Act*
- Authorizing the use of therapeutants in aquaculture under the *Canadian Food and Drugs Act and Regulations*
- Authorizing deposits to the environment through the *Aquaculture Activities Regulations*
- Issuing approvals under the *Canadian Navigable Waters Act*; etc



Support for First Nations, workers, and communities in this transition

The Plan facilitates a collaborative assessment and response to the impacts of the transition for First Nations, communities, businesses and workers, while identifying options and priorities for mitigating impacts, and a collaborative approach in support of an effective whole-of-government response.

Many First Nations and coastal communities that rely on the economic and employment opportunities associated with open net-pen salmon aquaculture are rural and remote with limited economic opportunities. In many cases, local and Indigenous-owned businesses rely on partnerships associated with the salmon aquaculture industry, as it is currently structured. It is important that impacts to communities are assessed and addressed in a manner that is responsive to the unique needs and perspectives of individuals, communities and First Nations, and which brings various levels of government together in a collaborative approach.

A whole-of-government coordinated response, in cooperation with the Government of B.C., to support

implementation of the Transition Plan provides a unique opportunity for impacted First Nations and communities to identify and guide effective response measures. These measures could include:

- Efforts to understand the economic impacts and opportunities associated with the transition;
- identification of training and reskilling supports for individuals focused on new industry opportunities;
- development of projects designed to protect and build upon the natural capital of natural resources within communities such as wild salmon; and
- development of new economic opportunities that align with particular communities' needs and values.

Implementation of the Plan is anticipated

to take place over a longer period than the five years associated with a transition away from open net-pen salmon aquaculture.

This approach will ensure that an

environment is created in which economic development opportunities for First Nations will be supported as they transition to new forms of sustainable aquaculture and other economic opportunities.



THEME 2



Identifying economic supports for the adoption of innovative and clean aquaculture technology

A coordinated Government of Canada approach, in cooperation with the Government of B.C., First Nations and others, will identify opportunities and priorities to support the trial and adoption of innovative and clean aquaculture technology, including marine and land-based closed containment. Attracting new innovation and investment in the sector will support B.C. becoming a world leader in innovative and clean aquaculture technology development and adoption.

This Transition Plan promotes the development and use of innovative and clean aquaculture technology in B.C., including opportunities to foster technology development and adoption, supporting an effective transition to more advanced and sustainable solutions.

A successful transition builds the capacity of British Columbia to become a world leader in innovative and clean aquaculture technology, including within the closed containment salmon aquaculture sector. It ensures that the sector remains competitive and

Innovation can take many forms, and there is no one set path. It can be a change to a process, adopting or adapting a technology already used elsewhere, creating a new technology, or pursuing a novel business model. Innovation is about ideas that create value for customers and help businesses stay competitive.

Engagement on innovation and technology will explore how the Government of Canada and others can work together with companies and communities to leverage their unique assets and capabilities. Economic development that is rooted in communities' values is most likely to lead to enduring and inclusive prosperity.

makes B.C. a target for domestic and international investment.

Transition Plan partnership discussions will explore mechanisms, scope, scale, approaches, and partnerships to support and enhance innovative and clean aquaculture technology adoption. This could include elements such as:

- research and development;
- support for Canadian innovation and pilots;
- reducing barriers to construction of new facilities;
- opportunities to attract investment in sustainable aquaculture partnerships;
- training and reskilling to support industry transition;
- technology transfer from world leading innovators; and
- technology adjacent initiatives such as access to renewable sources of electricity to support innovative and clean aquaculture technology development and adoption.

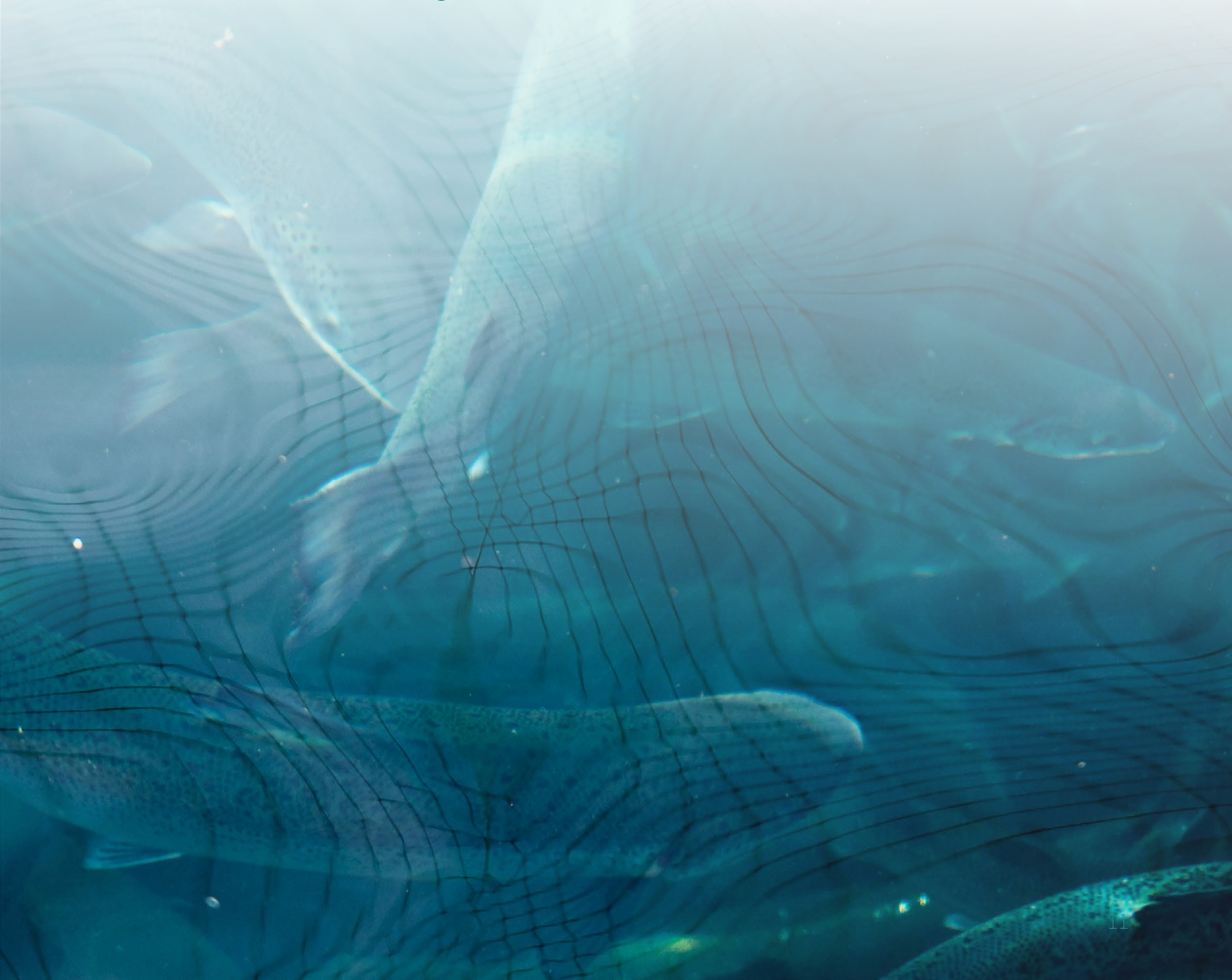
Consideration will also be given to how to support technological advances or innovative approaches in other

aquaculture sectors such as shellfish, seaweed, hatcheries, and other finfish species. Some First Nations have indicated this could make a significant contribution to the expansion of their local economies on the coast (for example, increasing hatchery or processing capacity or expanded opportunities to utilize integrated multi-trophic aquaculture approaches).

In this Plan — one size may not fit all. Unique approaches and innovations related to different types of aquaculture production could amplify economic development opportunities for communities on a local and national level.

First Nations, industry, coastal communities, all levels of governments, private businesses, academia, international experts and investors will all be important contributors to the development of approaches to facilitate a transition in innovative and clean aquaculture technologies. Advancement of these new technologies will leverage opportunities to enhance Canada's leadership in the blue economy.

New sources of clean, reliable energy generation and transmission are needed to power a net zero economy by 2050, including new and emerging industries such as sustainable aquaculture. While electricity is an area of provincial responsibility, a number of federal measures have been put in place to support the decarbonization of the electricity sector, including Investment Tax Credits, low-cost financing from the Canada Infrastructure Bank, and targeted programming such as the Smart Renewables and Electrification Pathways Program and the Clean Electricity for Rural and Remote Communities Program. In addition, the Government of Canada has established the Regional Energy and Resource Tables, as part of a collaborative initiative with the provinces and territories designed to identify, prioritize, and pursue opportunities for sustainable job creation and economic growth for a low-carbon future in the energy, electricity, mining, forestry, and clean technology sectors across all of Canada's regions.





Milestones, principles, and criteria for the phase down of salmon open net-pen aquaculture

Transition to a new management regime for salmon aquaculture in B.C. including clear milestones, principles and criteria for the phasing out of open net-pen salmon aquaculture.

A responsible transition will ensure that the phase out and ban on open net-pen salmon aquaculture takes place in a clear, orderly manner, which supports the interests and perspectives of communities most directly impacted by the transition.

- Fisheries and Oceans Canada intends to introduce [amendments to the Pacific Aquaculture Regulations to ban open net-pen salmon aquaculture](#). These amendments are intended to support both the implementation of a ban effective June 30, 2029, and the regulation of marine and land-based closed containment salmon aquaculture.
- Closed containment technology will be required to ensure the removal of waste and filtration or treatment of discharged water. Fisheries and Oceans Canada will work with subject matter experts to develop a [proposed definition of, and conditions of licence for, closed containment aquaculture](#) for marine and land-based infrastructure, which will be included in consultations.
- Where appropriate, Fisheries and Oceans Canada will work with First Nations and aquaculture companies to develop transition approaches for [individual licences](#) and associated reporting. In some cases, mitigations (locational changes to licences, infrastructure testing or updates, plans for access to hydropower) may be required to support a transition to closed containment.
- Canada, B.C., and First Nations will collaborate to [review the process associated with the decommissioning of sites](#), where appropriate, taking into consideration restocking and harvesting decisions consistent with the June 30, 2029, ban on open net-pen technology.
- Starting immediately, Fisheries and Oceans Canada will consider

new licence applications for closed containment salmon aquaculture for nine years. Fisheries and Oceans Canada will work with First Nations, other jurisdictions, industry, and other stakeholders to support the expeditious review of these applications, and consideration of support for projects which meet strict new criteria.

A transition in support of new economic opportunities and the adoption of innovative and clean aquaculture technology will require coordination and consideration of both what is being transitioned from (open net-pen salmon aquaculture) and what communities are transitioning toward. Planning will respect the unique cultural, economic, and social conditions related to individual First Nations and communities, and

will inform the activities and supports associated with each community's unique transition.

The Transition Plan measures will create opportunities for collaboration and harmonization between federal, provincial, First Nations, and local governments, in support of transition planning, which will be undertaken by First Nations and communities.

The success of this Transition Plan requires the milestones, principles, and criteria associated with a transition away from open net-pen aquaculture to align with the realities associated with a transition toward new economic opportunities. A critical path will be developed in consultation with First Nations and impacted stakeholders.

There are a number of milestones, principles, and criteria related to implementation of the ban, which will be addressed in the coming months by DFO and the partner agencies, including:

- **Development of an approach and timeline that identifies elements necessary to transition salmon aquaculture licences or production to closed containment (which may include access to hydro-power, conversion of licences and adoption of new infrastructure; and required training or testing associated with new technologies);**
- **Identification of milestones associated with a transition to new forms of aquaculture or development and adoption of innovative and clean technologies;**
- **Criteria related to conditions of licence, mitigations and standards associated with closed containment licences;**
- **Clarifications related to which species of fish are included in the ban and exploration of the potential of integrated multi-trophic aquaculture; and**
- **Outline of a process for amending the *Pacific Aquaculture Regulations* to enact a ban.**



Management of open net-pen salmon aquaculture until the ban is fully implemented

Responsible and transparent management of open net-pen salmon aquaculture in B.C. until open net-pens are fully transitioned to closed containment or decommissioned.

A responsible transition ensures that the aquaculture industry can make responsible decisions related to their employees, partnerships, inventory, and assets as the transition is implemented. Measures will be put in place to support the responsible oversight of remaining open net-pen facilities until a full ban is implemented.

- For the remaining time that open net-pens continue to operate, they must be responsibly managed in collaboration with First Nations and other government partners. **Enhanced monitoring and oversight will be in place for the next five years until the ban on open net-pens is fully implemented in 2029**, including more opportunities for First Nations to participate in monitoring activities within their territories, and to input into data transparency and reporting.
- **Enhancements to the conditions of licence** came into effect with the issuance of new licences on July 1, 2024. These conditions include a reduction in the allowable thresholds for sea lice during the wild salmon out-migration periods, new requirements related to reporting marine mammal interactions, and new inventory accounting requirements, which include detailed production cycle reporting on harvest, mortalities, predator interactions, and escapes. The Government of Canada intends to build on these protections by continuing to **undertake science reviews with external collaborators** and at the two-year point in licences **will undertake a review to determine if further protections should be introduced** into licences.
- For the next five years, **detailed and timely reporting on industry**

performance and compliance will be made publicly available in a timely manner. This includes public reporting of compliance with standards (including new sea lice requirements and sea floor impacts); proactive disclosure of interactions, bycatch, and escapes; and new annual public reporting related to salmon feed.

- As standards are increased, it is important that the salmon aquaculture industry be subject to strong oversight and that **strict compliance measures be applied — up to and including**

suspension or cancellation of licences in cases of serious or repeat non-compliance.

The Government of Canada and its partner agencies will continue to work collaboratively with First Nations to support and improve engagement in ongoing aquaculture management, including through enhanced monitoring of open net-pen aquaculture licences, engagement in processes associated with the decommissioning of sites, and measures associated with the Transition Plan's outcomes.

Public transparency, and monitoring of compliance and implementation progress will be key to the transition. Over the course of the transition this will include:

- A review and consultation on licence requirements and plan progress, including to catalyze as needed, enhancements to requirements of salmon aquaculture licences. This review and supporting changes will be taken at the two-year point of licences, in 2026;
- Enhanced, regular and timely reporting related to management performance, compliance; reporting on the Plan implementation; and salmon feed; and
- Enactment of enhanced compliance measures including suspension or cancellation of open net-pen aquaculture licences in cases of serious or repeated non-compliance.





Conclusion

The Transition Plan provides important opportunities for growth and leadership in innovative, sustainable salmon aquaculture; for British Columbia to become a world leader in the adoption of innovative and clean aquaculture technology; and to support long-term food security while protecting ecosystems and wild salmon for generations to come.

The journey ahead will require a significant amount of cooperation and collaboration between multiple levels of government. Open net-pen salmon aquaculture in B.C. is an important economic driver for a number of First Nations and coastal communities. This transition will disproportionately impact some of the province's most vulnerable populations, many of whom are already contending with a number of other challenges.

This Plan outlines the broad themes which will support the transition. Impacted parties will be invited to respond and to collaborate with the Government of Canada on the themes and the more detailed measures outlined in this Plan. Consultations will take

place leading to a final Transition Plan to be published in 2025. Consultation on implementation will continue following the release of the Transition Plan.

This Plan will ensure that First Nations are able to develop unique responses, which address concerns and issues in particular communities. The Plan provides a framework for assessment and implementation, while allowing for customization related to the unique situations and aspirations of individual First Nations.

Over the next ten years, the Government of Canada, together with its partner agencies, will produce an annual update on progress related to the Plan's implementation, which will be made available publicly.

Working together, this Plan provides a road map to transition salmon aquaculture to a make B.C. a world leader in innovation and clean technology adoption, while supporting a transition that reflects the unique interests and objectives of B.C.'s coastal communities and First Nations.

Discussion Questions

THEME 1

Support for First Nations, workers, and communities in this transition

Supporting First Nations through the transition to support community and individual objectives

What impact (in terms of jobs and economic activity) will the ban on open net-pen salmon aquaculture have in your community?

Where do you see economic potential in your communities? How does this align with the unique strengths, capabilities and values in your community? What does the community need to advance this potential?

What unique supports (economic, governance, etc.) do First Nations require to manage through a transition?

What are the next steps to properly respond to First Nation's interests and concerns?

How can the Government of Canada support economic development needs and aspirations of First Nations impacted by the transition?

What models for the collaborative delivery of transition approaches and programming should be considered in the Transition Plan?

Supporting communities, businesses, and workers in transitioning to new economic development opportunities while maintaining community well-being

What impact (in terms of jobs and economic activity) will the ban on open net-pen salmon aquaculture have in your community?

Where do you see economic potential in your communities? How does this align with the unique strengths, capabilities and values in your community? What does the community need to advance this potential? What is the role of industry in contributing to innovation in B.C. aquaculture?

How should the Government of Canada ensure that small businesses and individuals in small coastal communities are supported through the transition? What are gaps in existing Government of Canada programming for communities, businesses and workers that could support the transition? What else is needed?

What delivery mechanisms would be most effective to address the potential economic impacts of the decision to ban all open net-pen salmon aquaculture?

THEME 2

Identifying economic supports for the use of innovative and clean aquaculture technology

What is the role of industry in contributing to innovation in B.C. aquaculture?

What are gaps in existing Government of Canada programming to support innovation and investment in aquaculture?

What challenges (technological and/or other) must be overcome to make marine and land-based closed containment viable for salmon aquaculture?

What actions can governments take that would most effectively advance the transition to development and adoption of innovative aquaculture technology, including for shellfish and other forms of aquaculture?

What does innovation in other forms of aquaculture look like and what supports are needed to catalyze investments and innovation?

THEME 3

Milestones, principles, and criteria for the phase down of salmon open net-pen aquaculture over the five-year license period

What should the Government of Canada's highest priorities be in supporting a rapid transition to closed containment salmon aquaculture?

What new regulations and standards should be considered in relation to closed containment technology?

What measures would contribute to a transition to closed containment salmon aquaculture?

Should the Government of Canada consider distinct measures for the transition of native species?

THEME 4

Management of open net-pen salmon aquaculture until the ban is fully implemented

What public reporting would be most relevant during the transition?

What are key elements of enhanced monitoring?
