

CONNECTING WITH FIRST NATIONS, THE ORIGINAL STEWARDS OF THE COAST

First Nations have been the stewards of their lands, waters, and elements since time immemorial. They are the original environmentalists and have been successfully managing environmental stressors and changes to their ecosystems for thousands of years. When it comes to combatting global climate change, who better to lead the way than Indigenous peoples and their invaluable traditional knowledge?

By working alongside the First Nations in whose territories they operate, salmon farmers can apply Western science and research models with Indigenous traditional knowledge to best protect the surrounding environment and wildlife, as well as the salmon they are growing in the net pens. With Indigenous peoples guiding and overseeing salmon farming operations through initiatives like Guardian Watchmen and stewardship programs, wild and farm-raised salmon can successfully and safely co-exist and prosper in First Nations' marine spaces.



Photo by Brian Kingzett



"Indigenous Peoples have been faced with adaptation challenges for centuries and have developed strategies for resilience in changing environments that can enrich and strengthen current and future adaptation efforts." – [IPCC AR6](#)" (2)

Harmonizing Indigenous knowledge, stewardship, and Western methods is the path forward toward ecological marine health while encouraging economic growth on the coast, and will give wild salmon their best chance to survive both climate change and human impact stressors now and into the future.



INDIGENOUS OVERSIGHT, STEWARDSHIP, AND TRADITIONAL KNOWLEDGE OF THEIR MARINE SPACES

GUARDIAN WATCHMEN AND INDIGENOUS STEWARDSHIP PROGRAMS

First Nations take seriously their ancestral rights and responsibilities to take care of their lands, waters, wildlife, and food sources for future generations. Indigenous Guardians and stewardship teams are considered the “eyes and ears” for First Nations, keeping watch over the land and waters of traditional territories(3).

Guardians work in traditional areas of First Nations year-round, observing and gathering information about ongoing activities in their territories, whether on land or sea. By maintaining a presence in their territory, Guardians can help a Nation make careful decisions about resource use and continue traditional stewardship practices (Figure 1).

“Our [stewardship] obligation, how we uphold it in a modern way, is with Guardian monitoring programs and [Wei Wai Kum] participation in conducting modern, Western science, combined with our traditional knowledge, which results in, I think, the most informed decision,” says Chief Roberts, Wei Wai Kum First Nation.

Each Nation can draw upon traditional use data on archaeological sites and areas of cultural importance, guiding development away from sensitive areas (4).

Photo by Brian Kingzett





Figure 1. Members of the Tlowitsis Nation tour their traditional territory off the north-east of Vancouver Island.

Working with federal and provincial governments, Guardians also supervise companies operating in their territories and activities by the public and tourism operations to ensure compliance with environmental laws. This includes salmon farming. Some Guardian programs on the coast are already working with salmon farmers to:

- o monitor ongoing day-to-day operations of salmon farmers and their contractors,
- o conduct juvenile wild salmon sampling surrounding farm sites,
- o survey ecosystems in the area surrounding farms to monitor health of more sensitive species like kelp beds, eel grass, glass sponge reefs,
- o establish environmental baseline data of new potential sites using ROV technology,
- o identify areas suitable for marine sites for farms based on surveying, traditional knowledge, and awareness of marine conditions,
- o ensure Nation cultural sites are identified and protected from adverse impacts,
- o collect and analyze water quality and biological samples of environmental health,
- o share access to environmental data, ocean science, and traditional knowledge, and
- o assist in the careful and respectful decommission of farms being removed from the territory.



Figure 2. Wei Wai Kum First Nation's Guardians on the job in Laichkwiltach territory.

Photo by: Deirdre Leowinata / Coast Funds (4)

It is important to note that not all Nations currently have Guardian programs in place, and instead might implement other Indigenous stewardship programs or initiatives in their territories that would oversee operations in their territories. Many coastal Nations are currently working to build capacity in this arena by either growing current Guardian programs, introducing Guardian programs, or initiating stewardship programs that work for their Nation (Figure 2).



Photo by Brian Kingzett

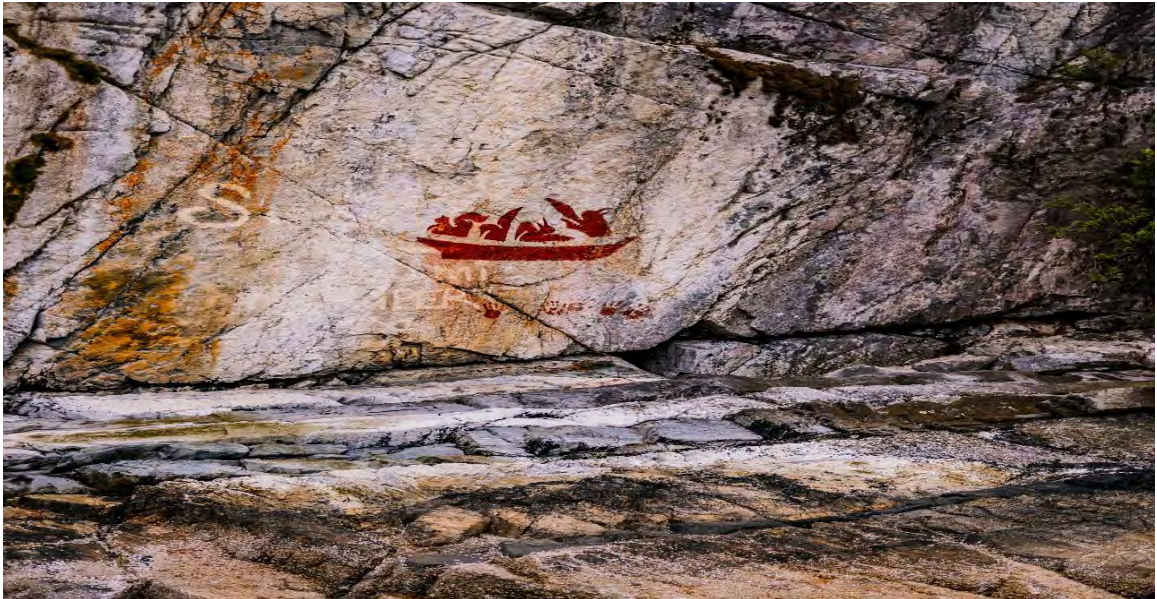


TRADITIONAL ECOLOGICAL KNOWLEDGE (TEK) AND INDIGENOUS-LED WESTERN SCIENCE

Traditional Ecological Knowledge (TEK) “represents experience acquired over thousands of years of direct human contact with the environment” however until recently, professionals in industrial development, governments, and resource management fields such as fisheries, wildlife, and forestry were slow to apply it to their existing methodologies of Western science (5). TEK was not acknowledged as credible or of utility in environmental management and was subject to who controlled the process and decision-making (6).

Today, scientists, researchers, and professionals are amongst those advocating for the rights of Indigenous people and their inclusion in land-based decision-making. Now recognizing the value of TEK, these groups are working with Indigenous peoples around the world to better understand and combat the mounting challenges and impacts of climate change on the environment.

In coastal British Columbia, Indigenous peoples have been studying, observing, and navigating their lands and waters for over 10,000 years and have been passing down that invaluable knowledge from generation to generation.





Wild salmon and their migration routes, feeding patterns, and behaviours in one area, for example, can be better understood by listening to and learning from an Indigenous person or Knowledge Keeper from that area who's been taught those characteristics (and the general history and geography of that area) by the generations before them. Both

Indigenous traditional customs and practices, as well as narrative and storytelling, were how knowledge was passed from generation to generation. As Westerners and settlers, it is important to take time to listen and hold space for these moments of knowledge sharing as an act of respect and recognition of their authority (7).

Braiding TEK and Western science can help understand, and therefore protect and revitalize, wild salmon and their surroundings in the face of warming oceans, watershed destruction, and overfishing. A growing number of universities and conservation organizations are recognizing and supporting First Nations with building on their existing capacities and adding new

By combining this rich wealth of traditional knowledge with data and methods of Western science, a more fulsome picture of a local environment can be obtained.

tools and resources to tackle the wild salmon decline on the west coast, recognizing each respective knowledge body and institution for its contribution to better environmental understanding.



Photo by Bill Pennell

The BC Centre for Aquatic Health Sciences (BC CAHS) in Campbell River, BC is an ISO-accredited lab that has recently modernized its governance system to be Indigenous led and is creating a common place for Nations to apply their knowledge and undertake research and monitoring projects to help restore wild salmon on the coast. This not-for-profit is “working with wild, enhanced, Indigenous and salmon farming communities within BC to provide relevant, timely and reliable research and diagnostic information to help make informed decisions on key issues facing salmon.” (8).

Organizations like universities and BC CAHS can help First Nation capacity and technology needs for their stewardship programs, while braiding TEK with Western science by providing training and teaching opportunities, offering workshops, and building science capacity within their communities to better maximize their conservation and oversight efforts to protect their marine environments.



Photo by Brian Kingzett

INDIGENOUS MARINE PROTECTED AREAS

Through generations of close connections with the environment, Indigenous peoples safeguard an estimated 80% of the world's remaining biodiversity. Together, the global community has an opportunity to reorient the way it interacts with nature and combat climate change through collaborating with, and learning from, Indigenous peoples, the stewards of nature and their territories (9).



Photo by Bill Pennell

On June 21, 2023, the federal government launched its United Nations Declaration Act Action Plan, a roadmap to help Canada implement the United Nations Declaration of Rights for Indigenous Peoples (10). Two measures that directly affect First Nations Marine Protected Areas (MPAs) and marine management planning are:

- o implementing Indigenous management of fisheries and fish habitats by:
 - o Amending fisheries legislation, regulations, or policies to incorporate Indigenous fishing rights, create collaborative tools for the conservation and protection of fish habitats, and enable the provision of capacity funding, and
- o maintaining Indigenous participation in climate action, sustainable development, and conservation (11).



Photo by Bill Pennell

For years, First Nations along the coast of British Columbia have been working together and with the federal and provincial governments to help establish Marine Protected Areas (MPAs). According to the Department of Fisheries and Oceans (DFO),

"Decades of scientific evidence documenting ecological, social and/or economic benefits of effectively managed MPAs demonstrates their importance as a management tool that can be applied to address multiple stressors and threats (12)."

MPAs have demonstrated positive ecological gains, while also providing a platform for First Nations to have a voice in, and lead, the ocean management of their territories.

Marine Protected Area as defined by DFO (12):

- o "A clearly defined geographical space recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".
- o "A collection of individual marine protected areas that operates cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfill ecological aims more effectively and comprehensively than individual sites could alone."

For DFO, the establishment of a network of MPAs will serve six goals (12) (described in greater detail below):

1. To protect and maintain marine biodiversity, ecological representation and special natural features.
2. To contribute to the conservation and protection of fishery resources and their habitats.
3. To maintain and facilitate opportunities for tourism and recreation.
4. To contribute to social, community, and economic certainty and stability.
5. To conserve and protect traditional use, cultural heritage and archaeological resources.
6. To provide opportunities for scientific research, education and awareness.



Photo by Brian Kingzett



Benefits of MPAs and MPA Network (12)

Ecological Benefits

Contribute to the protection of the structure, function and integrity of ecosystems by:

- o providing harvest refugia,
- o protecting habitats critical to lifecycle stages such as spawning, juvenile rearing and feeding,
- o complementing adjacent terrestrial protected areas for anadromous species (e.g., salmon),
- o protecting spawning stocks, spawning stock biomass and spawning aggregations to enhance or maintain reproductive capacity,
- o contributing to the restoration and recovery of species, habitat and ecosystem,s
- o enhancing local and regional fish stocks through increased recruitment and spillover of adults and juveniles into adjacent areas, and
- o assisting in conservation-based fisheries management regimes.

Social and Cultural Benefits

Contribute to social and cultural benefits by:

- o encouraging expansion of our knowledge and understanding of marine systems,
- o ensuring a stable resource base for non-consumptive and sustainable consumptive activities including fishing, recreation and tourism,
- o contributing to the coordination of ecosystem-based management of marine activities, thereby ensuring long-term economic opportunities for sustainable use,
- o providing researchers, educators and policy makers with reference sites to serve as natural benchmarks,
- o increasing the quality of life in surrounding communities, and
- o protecting historical and contemporary culturally and spiritually significant sites.



Photo Credit Kitasoo Xai'xais Nation

While some First Nations are working with the provincial and federal governments to continue to identify and establish MPAs along the coast, other Nations are taking marine protection of their territories upon themselves, like the Kitasoo Xai'xais, who unilaterally declared Gitdisdzu Lugyek, also known as Kitasu Bay, to be an MPA in the summer of 2022 (1).

Alongside the declaration, the Kitasoo Xai'xais published a marine management plan defining what economic activities are and are not allowed to happen in the 33.5-acre bay.

The establishment of MPAs and marine management plans has become a key goal for many coastal First Nations who are battling climate change, overfishing, poaching, and other stressors in their waters.

For several of these Nations, aquaculture is a part of their marine management plans, and working with resource industries like salmon farming companies to maintain ecological balance and economic opportunity will become a key component of this protection process.

“We make this declaration in accordance with Kitasoo Xai'xais laws, customs, principles and values and as the holders of inherent and Aboriginal Rights and Title on our unceded territorial lands and waters...Our laws include our inherent stewardship responsibilities to act in a manner that protects this unique place on behalf of past, current and future generations of Kitasoo Xai'xais.”
(1)



WILD SALMON REVITALIZATION

Wild Pacific salmon are the cultural and community lifeblood of coastal First Nations, as well as for hundreds of Nations up major river systems (like the Skeena and Fraser Rivers) deep into the interior of British Columbia. As mentioned in “Chapter 3 – Caring for Wild Salmon – the Local Picture”, coastal and Interior First Nations are committed to wild salmon revitalization through various enhancement programs, mainly through hatchery programs, watershed restoration efforts, establishing MPAs, and fisheries closures.

Nations might prioritize different species of wild Pacific salmon from one another for varying reasons, so which species, runs, and revitalization efforts a community might focus on ranges. How they conduct these restorative efforts can also vary based on geography, capacity, current health of runs, access, infrastructure, and cultural approaches.

As mentioned above, each Nation’s capacity to revitalize wild salmon in their territory will change as well, including which tools and capacity they use or have access to (staff/volunteers, biologists/fisheries staff, Guardians, infrastructure, funding, etc.).



Photo by Steel_Snorkel



Figure 3. Early Stuart sockeye fry raised in a Hatchery-In-a-Box program in Nakadzli.

Photo by Maureen Ritter



Some additional examples of current salmon revitalization tools being used by First Nations in BC are:

- o Hatchery Programs,
 - o Nation-and-community-led flow-through hatchery projects, and
 - o “Hatchery In a Box” program: The Hatchery in a Box (HIB) is a bio-secure (and bear proof) small scale fish hatchery that can be used in remote locations. The HIB was designed to hold up to 120,000 fertilized salmon or trout eggs and produce up to 100,000 1-gram fry. The HIB is a self-contained unit with an alarm system that can be programmed to a cell phone as well as an auto start oxygenation system in case of emergency (Figure 3).
- o Cryopreservation and storage of fish sperm: gene banks are available to be used to fertilize eggs in times of low returns or when a natural (or human caused) disaster occurs,
- o Watershed and stream restoration projects,
- o Area-based fisheries closures, and
- o Indigenous protected conservation areas (similar to MPAs).

PROBLEMS, PARTNERSHIPS, AND PATHS FORWARD

When salmon farming was first introduced to BC’s coast in the 1980s, the First Nations in whose territories the farms appeared were often not approached for permission to operate, nor were there meaningful consultations on site locations of the farms.

While this unfortunately was the general approach by most resource development during that time, such as forestry and mining, this practice by these early days salmon farms initiated a poor precedent for future procedures by larger international companies that would enter the scene over the next decade.



In the early days of salmon farming in BC, the sector operated with minimal technology, safeguards, and oversight that led to ongoing environmental issues for both the farm-raised salmon and the environment around the farms. There were also few environmental regulations that applied directly to the emerging sector.

This created the view that salmon farming was not done responsibly and was harmful to the environment and wild salmon. While operations, technology, and First Nations relationships have advanced

significantly in this time, for many the negative perception from the early days has endured four decades later, and social licence has been difficult to obtain (13).

In the last decade, there's been an increased awareness and understanding of Indigenous rights and engagement by both government and industry, thanks to the Truth and Reconciliation Commission, UNDRIP, and the adoption of Declaration on the Rights of Indigenous Peoples Act (DRIPA) by the Government of British Columbia (14).

The first protocol agreement between a company and First Nation was forged in 1998 between KITASOO XAI'XAIS Nation and what is now MOWI Canada West.



Photo by Bill Pennell



While not all First Nations are fully in support of finfish net-pen aquaculture in 2023, many Nations and salmon farming companies are on a journey of reconciliation, developing a range of relationships that recognize the Rights and Title of First Nations in the coastal environment on their own terms (15).



With First Nations especially, repairing, strengthening, and advancing those relationships has moved to the forefront of priorities for the sector salmon farming companies. In the past two decades, they have formed partnerships and formal agreements in the territories where they operate to increasingly recognize Indigenous interests and needs in supporting their coastal community. These companies have taken considerable steps to ensure that the future path of the sector is created with First Nations, not apart from them.

Salmon farmers have exited territories where they are not welcomed, and as of 2023, 100% of farm-raised salmon in BC (Atlantic or Chinook salmon) was done in partnership with First Nations.

While there is still work to be done and much to learn, First Nations and the sector are feeling their way forward, and finding that by working together, transparency, shared best practices, and opportunities can be achieved – and, in turn, coastal communities and the environment will benefit.





Impact Benefit Agreements (IBAs)

Across almost all resource industries in Canada, impact benefit agreements (IBAs) with First Nations have become the standard for projects and operations that are located on or impact Indigenous peoples' traditional territories. While IBAs vary by Nation, relationship, and company, there are six areas of provision typically covered in each: labor, economic development, community wellbeing, environmental, financial and commercial arrangements (16).



Today, all BC farmed salmon is raised in partnership with First Nations, and the input, guidance, and oversight of First Nations partners in salmon farming has evolved from non-existent to expected.

Beyond the financial compensation, IBAs in the salmon farming sector can include employment, education, and training opportunities for members; first-right-of-refusal for businesses and contractors from the Nation; environmental monitoring and oversight by First Nations Guardians; regulatory and environmental thresholds set by the Nations; wild salmon revitalization projects; watershed restoration commitments; and support and donations (monetary and in-kinds) to community programs.

Although the details vary from agreement-to-agreement, IBAs with salmon farming companies help create foundations of social and economic benefits and capacity building for many Indigenous communities on the coast, as well as long-term, stable and secure coastal economic investment.

COMMUNITY AND SOCIAL BENEFITS OF PARTNERSHIPS

For many coastal Indigenous communities between mid-Vancouver Island and the Central Coast, finfish farming (ranging from Atlantic salmon, Chinook salmon, and sablefish) is the primary source of a First Nation's own-source revenue, and a major employer for their members. It is generally difficult to find other forms of year-round, well-paying employment in these communities. Furthermore, employment in salmon farming is often more than a 'job' for First Nations in these communities. Indigenous salmon farmers can have a meaningful job without leaving their remote communities, and many indicated that by working in salmon farming in their traditional territory, they are able to keep an eye on operations in

their waters and are able to maintain a marine livelihood as they have for thousands of years.

As of February 2022, the industry directly and indirectly employed over 700 Indigenous people, provided \$51 million in total annual direct economic benefit to First Nations communities, and infused \$21 million each year into Indigenous-owned businesses (15). For most of these communities, those benefits cannot be replaced, and the threat of losing them via government closures is a real threat to their social safety.





“Fifty-one per cent of our economy is fish farms. We would go back to the 70s – alcoholism, all those social issues. Hearing from other leaders about the suicides that were just rampant, I, as a young leader, do not want to go down that path”. Isaiah Robinson, Councillor, Kitasoo Xai’xais Nation

As partnerships with the sector strengthen and help diversify a Nation’s marine management planning, benefits and opportunities will advance for coastal Indigenous communities, further improving social health and wellbeing, economic independence from the government, access to improved infrastructure, and capacity building (Figure 4).

The incomes and economic benefits from salmon farming has the ability to lift entire families away from dependence on social assistance and, by providing meaningful year-round employment, helps prevent significant social issues in communities, including addiction, poverty, and suicide.



Figure 4. General elements of partnership agreements between salmon farming companies and First Nations.

DEFENDING FIRST NATIONS' DECISION-MAKING RIGHTS

Following the decision by consecutive DFO ministers to close 19 salmon farms in core Laichkwiltach territory (the "Discovery Islands") in December 2020 against the wishes of the Rightsholder First Nations, other Nations with finfish farms in their waters were suddenly faced with the reality that the precedent could apply to their territories next.

To protect their rights, title, and self-determination of their ocean management, several Rightsholder Nations met in late 2021 to share their concerns and thoughts about moving forward. They later united under a Coalition of First Nations for Finfish Stewardship in March 2022, citing that it was their **sovereign right to determine for themselves whether, if, and how salmon farms operated in their territories.**

The Coalition Nations and other Rightsholder Nations who wanted to keep salmon farms in their waters met with

several federal and provincial ministers and senior staff throughout 2022 and 2023 to assert their right to self-determination, rights to sustain their traditional marine livelihoods, and economic prosperity in their territories.

In June 2022, the licenses for all salmon farms were extended for a temporary two-year term (outside of the Discovery Islands) while an official engagement process with DFO to develop a transition plan for the sector by 2025 was put into place by the federal government beginning July 2022. All impacted First Nations, the sector, and other stakeholders have been engaging with DFO on the transition of this sector; however, the continually shifting process and its timelines were a concern for many, and asks for more time, more socio-economic analyses, and more meaningful consultation were put forward by the Coalition and other Rightsholder Nations to federal ministers and senior officials, as well as provincial leadership.



Photo Credit Gwa'sala-'Nakwaxda'xw Nations

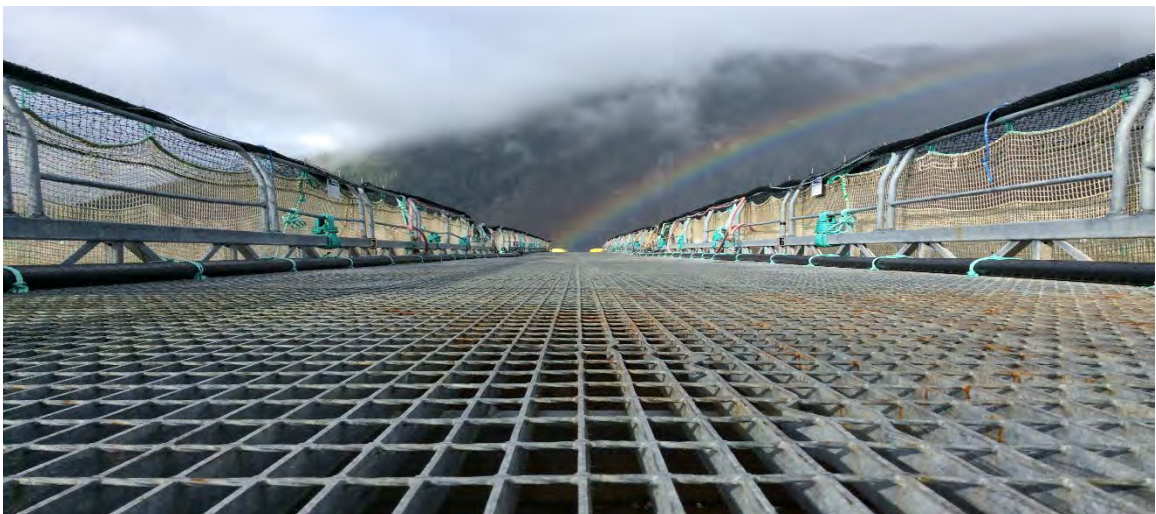


In the summer of 2023, after months of consultation, the federal government committed to conduct social and economic impact studies in all Indigenous communities that work with salmon farming to truly understand the integration of the sector. DFO also extended the Transition Plan engagement timeline by six months at the Coalition's request into January 2024 to ensure meaningful consultation was carried out in the process.



Photo by Bill Pennell

The protection of wild salmon is a priority for coastal First Nations, who would not put centuries of stewardship at risk for short-term gains.



On June 21, 2023 the Government of Canada rolled out the [UN Declaration Act Action Plan](#) – a national roadmap for implementing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (11). The release was announced by then Justice Minister David Lametti, alongside former Crown-Indigenous Relations Minister Marc Miller and Northern Affairs Minister Dan Vandal. The UN Declaration Act Action Plan supports and enhances decision-making rights of coastal Nations and fisheries and stewardship, particularly the measures:

- o Implementing Indigenous management of fisheries and fish habitats by:
 - o Amending fisheries legislation, regulations, or policies to incorporate Indigenous fishing rights, create collaborative tools for the conservation and protection of fish habitats, and enable the provision of capacity funding,
 - o Developing national aquaculture legislation that will support self-determination and the implementation of Aboriginal and treaty rights,
- o Maintaining Indigenous participation in climate action, sustainable development, and conservation, and
- o Strengthening Indigenous participation in decision-making over all matters that affect them (14).

This, in addition to the Province of British Columbia's commitment to the Declaration on the Rights of Indigenous Peoples Act (DRIPA), and Action #92 of the Truth and Reconciliation Commission (TRC), assist both the federal and provincial governments with their commitments to reconciliation with Indigenous peoples, while also supporting coastal First Nations to realize and execute their rights and self-determination regarding their marine management planning.

In particular, the right to free, prior, and informed consent is relevant and applicable to First Nations that both support and do not want support salmon farming.





92. We call upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources. This would include, but not be limited to, the following:

- i. Commit to meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects.
- ii. Ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects.
- iii. Provide education for management and staff on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal-Crown relations. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.

As of 2023, 100 per cent of BC's farmed salmon is raised in agreement with Rights Holder First Nations. Currently First Nations, federal and provincial governments, and the salmon farming sector are working together to build a responsible, realistic, and achievable transition of net-pen aquaculture in each Nation's territory.



OPPORTUNITIES AND OUTCOMES: FIRST NATIONS' SUCCESS STORIES IN SALMON FARMING



In the spirit of reconciliation, salmon farmers are building meaningful partnerships with First Nations that may offer ownership, capacity building, as well as business and employment opportunities to their communities (Figure 5).

First Nations involved in finfish aquaculture are finding unique ways to not only benefit from the sector, but to create Indigenous-led business opportunities from their partnerships. Indigenous-led businesses include processing & value-added opportunities, (smoked and canned salmon), transport boats, crew boats, and net washing services.

In communities like Klemtu located 800km north of Vancouver, the Nation has found a way to lead and benefit from the entire farm-to-table process thanks to the installation of a smoke house by their partner, Mowi Canada West.

Figure 5. Nellie Atleo, a member of the Tla-o-qui-aht First Nation, stands on a Chinook salmon farm in her traditional territory off of Tofino, BC.

KLEMTU SPIRIT SMOKED FISH – KITASOO XAI'XAIS NATION

The Kitasoo Xai'xais began farming and processing salmon independently in their waters in the late 1980s raising coho salmon. When they struggled to be successful in their operations, they reached out to what is now Mowi Canada West, thereby forming the province's first official Nation-company partnership in 1998.

Today, Mowi operates six salmon farms in Kitasoo Xai'xais territory with an average annual harvest of 5,000 tonnes of salmon. The processing plant in Klemtu was recently converted to a smokehouse, and in December of 2021, Walmart Canada was announced as the first retailer of Klemtu Spirit Hot Smoked Atlantic Salmon, a newly launched seafood product produced by the Nation in partnership with Mowi.



Now in 2023, the product is carried in multiple grocery outlets across Canada and will soon expand to retailers in the United States.

Klemtu Spirit is an admirable example of how a First Nation can lead the success of fish farms in their water from grow-out to value-processing – or from farm to table. From farming to harvest (with Guardian oversight), to smoking, and packaging, the Kitasoo Xai'xais are involved in, and benefiting from, hosting Atlantic salmon farms in their territory. They are the first

Nation in BC to oversee almost every aspect of the sector in their territory (excluding processing, transportation of, and producing the sleeves for Klemtu Spirit).

Today over 50 per cent of the Kitasoo Xai'xais' revenue derives from their salmon farming partnership, all while conserving over 52 per cent of their territory through their Great Bear Sea and Rainforest initiatives and their recent creation of an Indigenous marine protected conservation area (IMPCA).



Fish farming and smoking is the main source of employment in Klemtu, generating more than 50 jobs for the small, remote community on the central coast of British Columbia. The Kitasoo Xai'xais pride themselves in stewarding their territory and guarding their values. For the Kitasoo Xai'xais, it is important to ensure that future generations inherit healthy lands and waters to steward for the next millennia.

“Our values ensure that the products we produce in our territory are done so in a way that minimizes the impact on the natural world and other species and does not harm the environment.” Isaiah Robinson, General Manager, Kitasoo Development Corporation



GRATITUDE SEAFOOD – NUU-CHAH-NULTH SEAFOOD LP

“When you purchase seafood from us, you join our journey and become part of the circle. Every purchase breathes new life into your community and ours.”

Gratitude Seafood, Nuu-chah-nulth Seafood LP.



Photo Credit Gratitude Seafood

The Nuu-chah-nulth-speaking people consist of 14 First Nations on the west coast of Vancouver Island, ranging from the Dididaht on the southwest coast of the Island, to the Che:k'tles7et'h' to the north.

Of these 14 communities, five partnered together to create Nuu-chah-nulth Seafood LP, “a First Nation owned seafood enterprise that operates on Vancouver Island’s pristine West Coast.

Nuu-chah-nulth Seafood offers planning and management support to our Nations

and their community members in various aspects of fisheries and aquaculture” (17).

In 2015, Nuu-chah-nulth Seafood purchased St. Jean’s Cannery and Smokehouse in Nanaimo, which enabled the partner Nations to benefit from owning Vancouver Island’s largest cannery and smokehouse.

The purchase also made it possible for the Nations to expand beyond their value-added wild-caught seafood business opportunities on Vancouver Island by working with the farmed salmon sector. Purchasing Atlantic salmon from producer companies, Nuuchahnulth Seafood began offering canned Atlantic salmon (smoked and regular) at St. Jean's under the new brand Gratitude Seafood. The canned salmon is produced "using Indigenous approved fishing and production processes" with proceeds from sales going back into the five Nuuchahnulth partner Nations.

Gratitude Seafood is "authentic aboriginal", and an example of Indigenous coastal communities benefitting from business opportunities with BC's salmon farming sector.

Three percent of annual sales of Gratitude Seafood products go directly back into Nuuchahnulth communities, with 1.5 per cent going to restoring language and identity, and the other 1.5 per cent going to creating new seafood economic opportunities for the Nations (18). Gratitude Seafood is now sold in several major grocery retailers across Canada.



Photo by Brian Kingzett



JAMES WALKUS FISHING COMPANY – GWA’SALA - ‘NAKWAXDA’XW

From humble beginnings with a single leaky boat, James Walkus of the Gwa’sala - ‘Nakwaxda’xw Nation built the multimillion-dollar fishing company, James Walkus Fishing Co. However, when wild fish stocks began to decline, the company and its employees faced a dismal future. Walkus overcame this

challenge by converting to aquaculture and forging a partnership with Mowi Canada West to provide supply and transport services. Aquaculture now accounts for 60 per cent of Walkus’ business and provides jobs for 30 people on North Vancouver Island, many of whom are First Nations (Figure 6).



Figure 6. In 2014, Walkus launched a \$9M farm-raised salmon transport boat – and added a second \$11M boat in 2018.

“The partnership has been tremendous. We have First Nations people from our reserve working on these boats. Plus, many of them are working at the processing plant. It’s absolutely great for our people.” James Walkus, James Walkus Fishing Company.

CHIEF'S PRIDE AQUACULTURE CO. – TLOWITSIS NATION

In 2021, the Tlowitsis Nation created a business called Chief's Pride Aquaculture Co. (CPAC) and signed a three-year contract with Grieg Seafood BC to provide net-washing services to its three farms in Clio Channel off Johnstone Strait – part of the Tlowitsis' traditional territory. The farms were named by the Tlowitsis and are called Noo-la, Tsa-ya- and Wa-

kwa, Kwak'wala for Big Brother, Little Sister, and Little Brother.

This contract with Grieg Seafood provides the Nation's business, CPAC, with automated net-washing equipment, a skiff, a crane barge and, most recently, an accommodation barge in Clio Channel for its all-Indigenous employees.



“As much as there seems to be controversy about the [salmon farming], we believe many First Nations should be looking at long-term relationships with salmon farming partners. There are only so many opportunities available, and most of the Nations have traditional territories adjacent to the inlet waters – it only makes sense.” Councillor Thomas Smith, Tlowitsis Nation.



For the Tlowitsis, being able to provide employment for their members through CPAC, Grieg Seafood, and other ocean-based business opportunities in their own traditional territory is invaluable. The Nation also has its own Guardian Watchmen keeping an eye on salmon farming operations, contractors, and other ongoing in its marine space (Figure 7).



Figure 7. Tlowitsis men on a canoe team, date unknown.

INDIGENOUS-LED FUTURE OF FINFISH AQUACULTURE IN BC

*Photo by Brian Kingzett*

For over 10,000 years, Indigenous peoples on BC's coast managed their lands, waters, and elements in a holistic way that encouraged healthy, balanced ecosystems, and plentiful resources. As discussed earlier, the traditional knowledge of coastal Indigenous peoples is proving to play a major contributor to the fights against climate change, habitat destruction, and the loss of species.

Salmon farmers have learned about the importance of relationships with First Nations, and that their operations go far beyond simply growing fish in the ocean. Working with local First Nations and their Indigenous knowledge can and will help in raising salmon successfully alongside revitalizing wild salmon stocks and protecting the environment. It will also

build stronger relationships between First Nations and the industry, encourage important work on reconciliation, and help First Nations communities reclaim their decision-making authority over their marine spaces.

Already coastal First Nations are finding increasing autonomy when it comes to marine management planning in their territories, including protection, conservation, revitalization, and economic opportunity. For several of those Nations, aquaculture (finfish, shellfish, seaweed) is a part of their ocean management planning, and by overseeing aquaculture operations with their Guardians, traditional ecological knowledge, and decision-making authority, can benefit economically and socially while protecting their territory.



First Nations are striving to reclaim their rights to manage their marine spaces as they did pre-colonization. With full support from the sector, the future of finfish farming in British Columbia will be led by the First Nations in whose territories the farms operate in.

How that will look will be different for each Nation and community and will be based on varying partnerships with salmon farming companies. This message is currently being conveyed by Rightsholder First Nations to both the provincial and federal governments, as a Transition Plan for finfish aquaculture is being developed between these three parties, the companies, and other stakeholders (19).



Photo by Brian Kingzett

By encouraging First Nations to lead this transition process, the federal and provincial governments can help advance reconciliation with coastal communities while growing Canada's Blue Economy and trusting that Indigenous traditional knowledge will do what it has for millennia – create balance.

“Salmon farming is a small drop in the bucket of the overall holistic approach we will take to managing our marine spaces. It is a part of the whole. We will be weaving Indigenous traditional ecological knowledge with western science, advancing technologies, and the oversight of our Guardian Watchmen to help lead aquaculture in Canada, all while benefitting our communities via own-source revenue.” Dallas Smith, spokesperson, Coalition of First Nations for Finfish Stewardship

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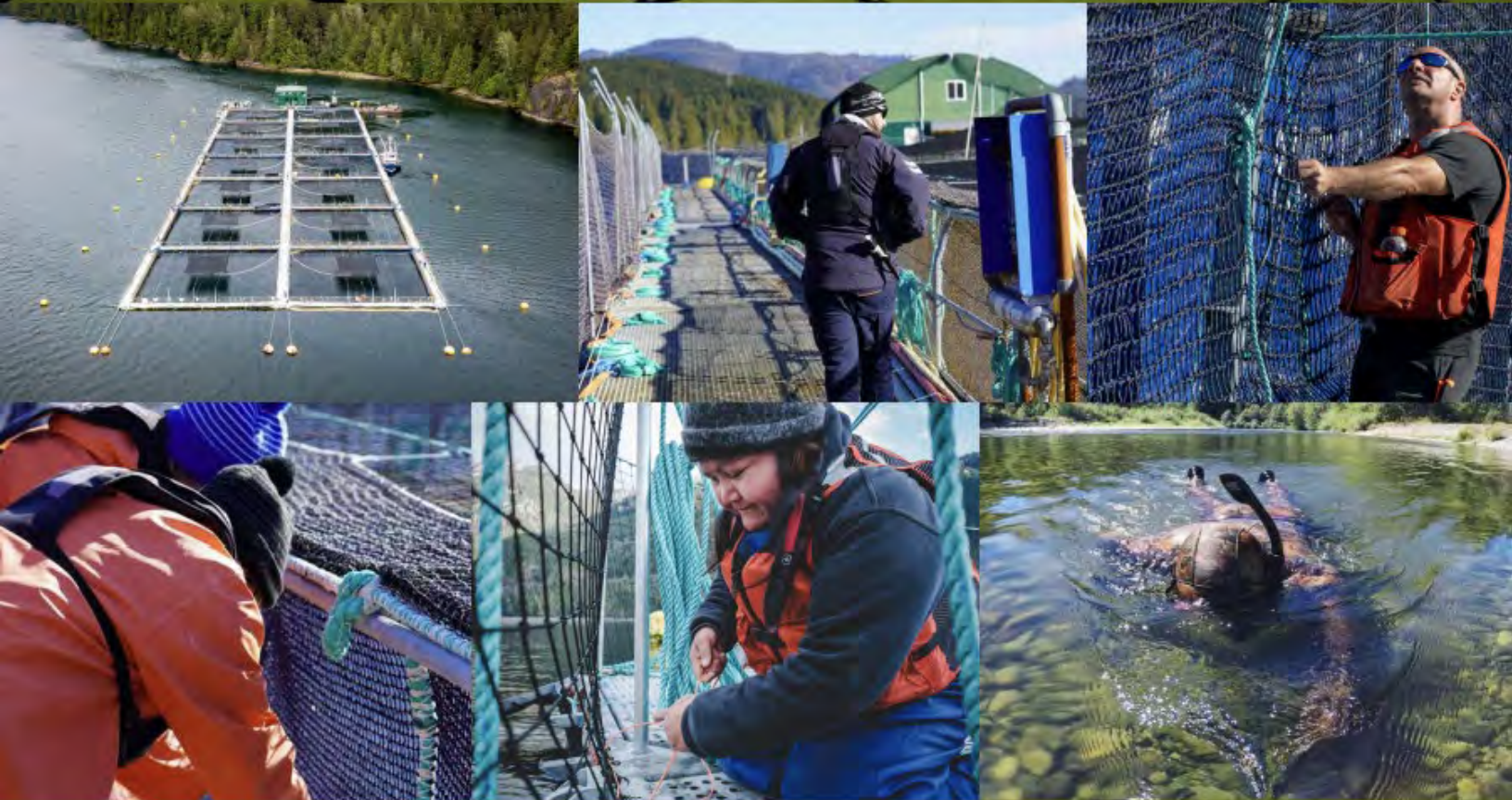
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CHAPTER 5

CARING FOR THE ENVIRONMENT

PREVENTING ESCAPES



This document describes important measures salmon farmers take to prevent escapes and discusses what is known about the likelihood that farm-raised salmon will establish in British Columbia

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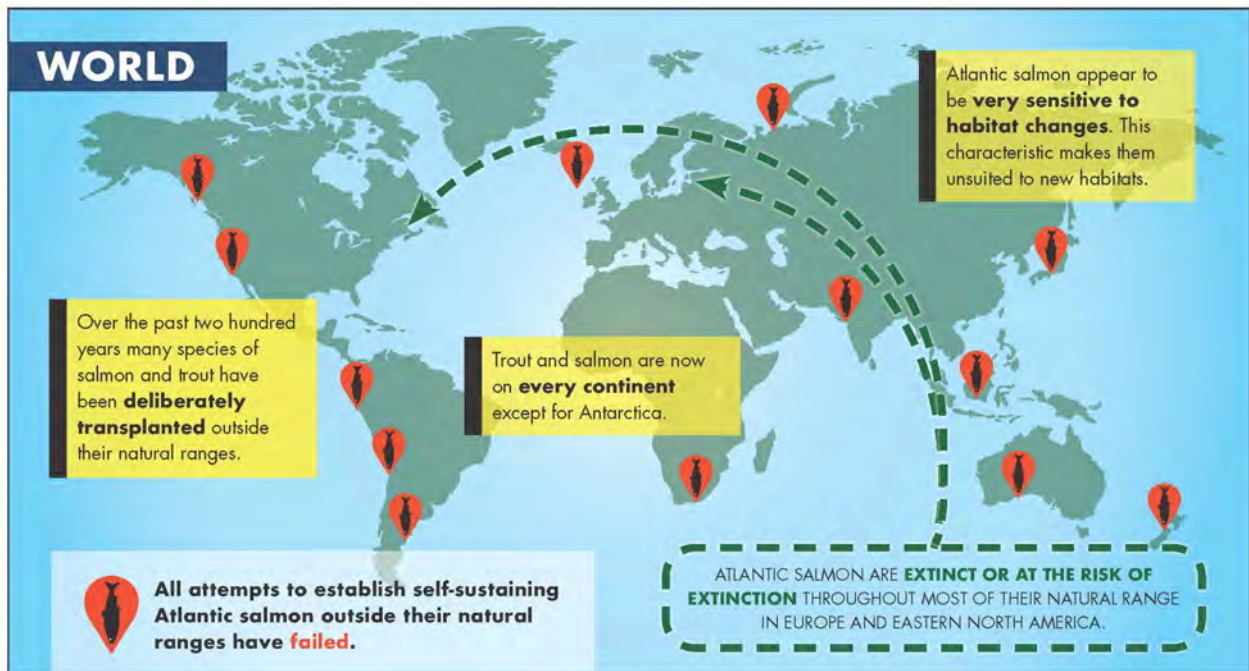
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Citation: BC Salmon Farmers Association. 2024. Caring for wild salmon: Preventing escapes in Modern Salmon Farming in BC: A Review. BC Salmon Farmers Association, Campbell River, British Columbia. 24 pages. available at www.bcsalmonfarmers.ca

Acknowledgements: This report is the culmination of input from researchers, veterinarians, and subject matter experts, both internal and external to the BC salmon farming sector. We are very grateful to the First Nations of the Coalition of First Nations for Finfish Stewardship, which initiated this project, provided the chapter on Indigenous Stewardship, and reviewed and commented on materials in other chapters. Unless identified, photographs have been sourced from the files of producer companies. Photographs donated from personal collections have been credited to the individual.

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CHAPTER HIGHLIGHTS – PREVENTING ESCAPES



BC

The **Atlantic Salmon Watch Program**, which has monitored for the presence of escaped Atlantic salmon since 1991, has reported no evidence of any self-sustaining populations in BC.

- Over the past 100 years, the government has tried about **200 times** to deliberately establish self-sustaining Atlantic salmon populations in BC.
All attempts have failed.
- Escaped farm-raised Atlantic salmon are **rarely successful** finding food, are not well suited to avoid predators, do not appear to compete well with Pacific salmon, and cannot interbreed with other salmon species.

FARM

BC Atlantic salmon farmers have **reduced fish escapes by 97%** since 2010.

- 2,998** farm-raised Pacific salmon have escaped from farms since 2012. During the same time period **2,790,629,000** Pacific salmon were released from public hatcheries in BC.
- Farms have strict cage system and net inspections and maintenance.
- Secondary predator nets, jump nets above the surface and bird nets on top of cages.
- Comprehensive employee training.**
- Escape prevention and response plans.

Salmon farmers routinely hear the concerns of First Nations and members of the general public that farm-raised salmon may escape and establish self-sustaining populations in British Columbia (BC), and accept the responsibility to keep farm-raised salmon contained and separated from wild salmon.

Over the past 200 years, many species of salmon and trout have been deliberately transplanted outside their natural ranges and have successfully established self-sustaining populations. These include brown trout, cutthroat trout, eastern speckled (Brook) trout, golden trout, rainbow trout, Chinook salmon, chum salmon, coho salmon, and pink salmon. Masu salmon is the only Pacific salmon that has not been successful in establishing self-sustaining populations beyond its natural range through artificial transplants. At least one species of trout or salmon is now present on every continent except for Antarctica.

All attempts to establish self-sustaining sea-run Atlantic salmon populations outside their natural range have ended in failure. Considered to be a superior game fish, significant efforts to establish Atlantic salmon occurred in South Africa, India, Australia, New Zealand, Argentina, Chile, Ecuador, Columbia, India, Indonesia, Japan, Faroe Islands and Western North

America. While the factors responsible for the failures of Atlantic salmon introductions are not fully understood, a narrow tolerance for habitat conditions has been suggested to play a role.

There is no evidence of any self-sustaining Atlantic salmon populations in BC, despite almost 200 purposeful attempts to create them during the past century and incidental farm escapes that have occurred from BC salmon farms during the last five decades.

The Atlantic Salmon Watch Program (ASWP) was established in 1991 to create a database of Atlantic salmon reported or observed in the BC waters. Despite numerous river systems where adults were reported—and one report of juveniles that were presumed to be a product of wild spawning—the ASWP did not identify any evidence of established feral populations of Atlantic salmon.

In collaboration with First Nation partners, government regulators and the aquaculture supply chain, BC salmon farmers have reduced fish escapes by 97% since 2010. Given the very low levels of escapes from BC salmon farms since 2010 it is highly unlikely that future escapes would occur at a level sufficient to create a risk of establishment.

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