



Net-cage salmon farming problems

Salmon aquaculture (farming) is the industrial production of salmon from egg to market. Currently the vast majority of the farmed salmon industry uses open net-cages in the ocean. Usually located in sheltered bays along the coast, these floating feedlots can hold up to a million fish in an area the size of two football fields.

Open net-cage salmon farming is one of the most harmful aquaculture production systems and poses environmental threats in all regions it is practiced. In British Columbia:

- » **Sea lice** infestations on salmon farms can infect and kill juvenile wild salmon passing in close proximity to the farms as they migrate out to sea. Runs of wild pink and chum salmon have collapsed in the past in areas like the Broughton Archipelago where dense concentrations of salmon farms breed millions of lice.¹ While the situation has been slightly improved in the past year by the fallowing of some farms during the out-migration combined with aggressive lice treatment with the pesticide-based medication, Slice™, the only viable long-term solution is removal of the open net-cages.
- » The high densities of fish on farms and exposure to pathogens within net-cages create breeding grounds for **disease** as witnessed by the Infectious Salmon Anemia outbreaks in Chile. The rampant spread of the disease resulted in the culling of fish and closure of farms in a region that was the second largest salmon farming producer in the world. However, in British Columbia, salmon farming companies are not obligated to make disease information concerning their farms public.
- » The industry is heavily reliant on chemicals such as **antibiotics** (to combat disease) and **pesticides** (to combat sea lice) added to feed. Net-cages allow waste feed laced with these substances to be released directly into the surrounding waters, where they can harm other marine life. As louse resistance to standard treatments is growing, in some regions the industry is turning to chemical “baths”, which results in treated water being discharged directly into surrounding marine ecosystems.
- » The **waste** from millions of farmed salmon can build up under the pens smothering portions of the ocean bottom and contaminating the marine environment. The bulk of waste may sometimes be carried away from the farm site by ocean currents, but this too ends up collecting in another place and causing localized pollution.
- » 91% of salmon farmed on BC’s Pacific coast is Atlantic salmon. On a far too regular basis, thousands of Atlantic salmon **escape** their pens posing a serious ecological threat to indigenous



Net-cage salmon farm in the Broughton Archipelago

wild salmon the foundation of coastal life

Formed in 2001, the *Coastal Alliance for Aquaculture Reform (CAAR)* is a coalition of five member groups working to ensure salmon farming in British Columbia is safe for wild salmon, marine ecosystems, coastal communities and human health.

Members:

[David Suzuki Foundation](#)

[Georgia Strait Alliance](#)

[Living Oceans Society](#)

[T. Buck Suzuki Foundation](#)

[Watershed Watch Salmon Society](#)

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wild Pacific salmon. Escaped farmed fish have the potential to out-compete wild salmon for habitat and food as well as transfer disease and pathogens to wild fish.

- » Marine mammals, like seals and sea lions, are frequently killed trying to access farmed salmon either by drowning tangled in farm nets or by being deliberately shot by the companies.

All of these impacts add up to irreparable damage to wild salmon populations, and the ecosystem that depends on them.

Background

Salmon farming in British Columbia began in the early 1970s with small, locally owned farms, mainly on the Sunshine Coast north of Vancouver and Whistler. Poor environmental conditions, diseases and market challenges forced many small operators out of business. By 2000, consolidation had put the entire BC industry into the hands of a few large companies with 92% of the industry now controlled by three Norwegian corporations. There are approximately 136 salmon farm licenses with over 85 farms active at any given time.

The industry was at first welcomed in BC due to the promise of much needed jobs for coastal communities. However, by the 1990s, the BC salmon farming industry had tripled production without a corresponding increase in new jobs. This, plus mounting evidence of the unsustainability of net-cage technology, has made salmon farming one of the most contentious issues in BC.

There are currently three areas with the highest concentration of salmon farms where out-migrating wild salmon are at risk and require emergency protection from open net-cage farms.

These are:

- » **The Broughton Archipelago** (south central coast of British Columbia)

- » **The Wild Salmon Narrows** (northern Georgia Strait)

- » **Clayoquot Sound** (United Nations Biosphere Reserve, west coast of Vancouver Island)

To see maps of these areas visit: www.farmedanddangerous.org/page/maps

Many organizations (including two current CAAR member groups) have been working on salmon aquaculture issues since the late 1980s and early 1990s. Throughout, CAAR and its member organizations have offered both rigorous scientific analysis and documentation of local information regarding the numerous problems associated with open net-cage salmon farming.

CAAR members have urged policy initiatives and solutions that would maintain aquaculture jobs while protecting BC's marine health and wild salmon.

Ending the use of open net-cages and shifting the industry to closed containment systems will help ensure a sustainable future for aquaculture as well as protect wild salmon and everything that depends on them.

¹ Krkosek, M., M.A. Lewis, A. Morton, L.N. Frazer and J.P. Volpe. (2006). Epizootics of wild fish induced by farmed fish. Proceedings of the National Academy of Sciences of the USA. 103:15506-15510.