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Open-net-cage fish farming

Open-net-cage fish farming was pioneered in Norway in the 1960s. Since then, the industry has expanded to Scotland, Ireland, Canada, the U.S., and Chile, but it is dominated by a handful of multinational corporations.



Current fish-farming practices involve open-net cages like these that allow fish to escape and pollution to flow freely into the surrounding water.

Open-net-cage fish farming is a controversial practice that has raised serious environmental concerns around the world.

Communities on the B.C. coast rely on a healthy marine environment to support industries such as tourism, sport fishing, and commercial fishing, all of which are affected by current commercial fish-farming practices.

Problems associated with open-net-cage salmon farming include:

- Sea lice and disease from farmed salmon threaten wild stocks.
- Pollution from farms contaminates surrounding waters.
- Drugs, including antibiotics, are required to keep farmed fish healthy.
- Escapes of farmed fish (alien species) threaten native wild fish.
- Net loss: Farmed fish are fed pellets made from other fish, depleting other fish species on a global scale.

But there are solutions to these concerns.

In 2001, the Honourable Stuart Leggatt conducted an independent public inquiry into salmon farming in British Columbia. His report, Clean Choices, Clear Waters, is available on the Leggatt Inquiry website.

Summary of problems:

Since the 1980s, aquaculture -- the aquatic version of industrial agriculture -- has been the fastest-growing supplier of fish worldwide. Some observers see aquaculture as an opportunity to take the pressure off wild fish stocks while addressing the growing imbalance between fish production and food requirements for an expanding world population. While aquaculture can be beneficial in some cases, this is not the case when carnivorous species are farmed.

Salmon, for example, are carnivores and are fed pellets made from other fish. Apart from the ecological and health concerns associated with salmon farming, farmed salmon actually represent a net loss of protein in the global food supply as it takes from two to five kilograms of wild fish to grow one kilogram of salmon. Highly nutritious fish like herring, mackerel, sardines, and anchovy are used to produce the feed for farmed salmon, which is essentially luxury fare for the North American, European, and Japanese markets.

The vast majority of global aquaculture production, about 85 per cent, uses non-carnivorous fish species -- such as tilapia and catfish -- produced in land-based ponds for domestic markets. Most ponds are ecologically integrated into the agricultural, industrial, and community fabric, meaning, for example, that wastes become fertilizers rather than pollutants.

The David Suzuki Foundation believes that the fish farming industry around the world, including on Canada's Pacific and Atlantic coasts, must move away from using net cages to using safe, fully enclosed systems that trap wastes. Farmed-fish feed often contains antibiotics, other drugs and pesticides, and excess feed and feces smother the ocean floor beneath and around the net cages, causing significant habitat damage.



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FAQs

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Fish escapement and the transfer of disease from farms to the marine environment are other serious concerns. In British Columbia on Canada's West Coast, more than one million fish are estimated to have escaped from net cages since the early 1980s.

A unique problem caused by the British Columbia salmon farming industry is the introduction of a non-native species -- Atlantic salmon -- into the Pacific ocean. The United Nations has declared that the introduction of exotic, or alien, species is the greatest threat to global biodiversity after habitat loss. So, why Atlantic salmon in the Pacific? It all goes back to Norway where the industry was born, and an expansion of Norwegian interests into B.C. in the early 1980s.

Norway was the world leader in farmed salmon production and created markets that previously did not exist using Atlantic salmon. Therefore, Atlantic salmon became the favoured farmed variety, and with decades of experience with raising Atlantics, Norwegian companies decided to introduce the foreign species instead of starting anew in B.C. with Pacific stocks. These companies had invested heavily in developing markets for Atlantic salmon, and products from Pacific stocks did not easily fit into this marketing strategy. Also, Atlantic salmon convert feed to meat more efficiently and are less aggressive -- leading to greater growth and lower mortality -- under culture conditions than chinook or coho salmon, two species farmed in B.C.'s nascent domestic industry.

Worldwide, open-net-cage fish-farming industries use publicly owned coastal waters to support what are essentially intensive private feedlot operations that dump drug-laced sewage into the ocean. Governments looking for new opportunities in rural, economically depressed coastal areas often have encouraged the industry. But increasingly, citizens are questioning whether any benefits are offset by the alarming array of environmental, social, economic, and health costs.

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