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How sustainable is B.C. seafood?

Sustainability not solely a wild-versus-farmed equation

By Nelson Bennett | July 20, 2020



Mowi ASA is investigating a hybrid system that would prevent the exposure of wild fish to fish farms | Mowi Canada West

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As most British Columbians are probably aware, wild salmon stocks in B.C. have been in trouble for some time.

So much so, that the Marine Stewardship Council has suspended B.C.'s wild salmon certification, due to concerns about stock abundance. The program is currently in limbo.

Last year's return was the lowest on record for Fraser River sockeye. If you bought wild sockeye last year, it almost certainly came from Alaska, maybe even Russia – which means it had a bigger carbon footprint than it would have had it been caught locally.

British Columbians may also have an aversion to wild salmon's alternative – farmed Atlantic salmon – which has been branded by anti-fish farm activists as a threat to wild stocks.

So what are environmentally conscientious British Columbians to think? Is the seafood produced in B.C. sustainably managed? Can you buy and eat it with a clear conscience?

The answer is 'yes,' says Sophika Kostyniuk, manager of the Vancouver Aquarium's Ocean Wise sustainable seafood program.

“We are fortunate to live in Canada, from a management perspective, where we are considered as having oceans, rivers, lakes, fisheries that are very well managed,” Kostyniuk says.

British Columbians can rest assured that, if a stock suffers from low abundance in a given year, Fisheries and Oceans Canada (DFO) will shut commercial fisheries down.

Murdoch McAllister, associate professor at the University of British Columbia's (UBC) Institute for the Oceans and Fisheries, enumerates a long list of innovations and management practices in place in B.C. that address stock management issues. They include cameras on board long-line fishing boats to monitor bycatch and quotas for some species.

To address declining rock fish stocks, the DFO has set aside 30% of rock fish habitat, making it off-limits to fishing. And sport fishers who accidentally catch a rock fish

that is listed as endangered – Yelloweye, for example – are now required to attach descending devices when releasing the fish, since these deep-dwelling fish have swim bladders that expand when brought to the surface, and prevent them from submerging.

Fish farmers, too, have introduced innovations to address sustainability issues, including mechanical “hydrolicers” that reduce the need for pesticides in treating sea lice, and relocating farms to bays with higher energy flows, which provide better flushing.

Some fish farms are also experimenting with hybrid systems that combine elements of open net pens and land-based recirculating aquaculture systems. Mowi ASA, for example, is investigating a hybrid system that would create a physical barrier between the ocean and net pens to prevent the exposure of wild fish to fish farms.

Despite such innovations, Ocean Wise still doesn’t recommend farmed salmon reared in open net pens, although the Monterey Bay Aquarium’s Seafood Watch program does: it rates B.C. net-pen Atlantic salmon as a “good alternative” to wild Atlantic salmon.

“That industry has actually shown tremendous improvement in the last 20 to 25 years around the world,” Kostyniuk says. “They’ve reduced their food conversion ratio, so they’re using less wild capture forage fish to feed their fish. Antibiotic use is lowered. There have been some relocations of farms so that they’re not in these highest impact zones.

“But it still does not meet our bar. They’re getting closer, but they’re not there yet.”

That’s why chef Ned Bell – new co-owner of the Naramata Inn on Lake Okanagan – still doesn’t put B.C. farmed Atlantic salmon on his menus, despite being a vocal supporter of fish farming.

“If it’s not Ocean Wise, I will not serve it,” says Bell, who is one of Ocean Wise’s chef ambassadors. “That being said, I am a huge supporter of the aquaculture industry.”

A number of organizations, from the World Wildlife Fund (WWF) to the United Nations (UN), promote aquaculture, which now provides roughly half of the world’s seafood. It is seen as a way to reduce pressure on wild capture fisheries, while feeding

an ever-growing world population, with a smaller carbon footprint to boot.

About one-third of the world's capture fisheries are fished at unsustainable levels, according to the UN. The oceans' ability to produce wild fish is finite, so many species are already harvested at the maximum sustainable level.

The oceans simply can't produce enough fish to feed the world's current population, much less a growing one, which is why aquaculture is being promoted by groups such as the WWF and UN as one of the most sustainable forms of protein production.

It has a much lower environmental footprint than beef, pork or chicken, and a smaller carbon footprint than industrial fishing.

In 2016, carbon dioxide emissions from the global industrial fishing sector totalled 159 million tonnes, compared with just 39 million tonnes in 1950, according to a study by UBC's The Sea Around Us research initiative.

Certain sectors are simply harder to decarbonize than others, and commercial fishing is one of them. Carbon emissions are also associated with the transportation of fish – by air cargo and truck – when imported from other countries or regions.

The biggest influence, in terms of reducing the industry's carbon footprint and taking pressure off of certain wild stocks, lies not just with governments and regulators, but with the consumer as well. Consumers can use their buying power to eat less imported seafood and more locally caught or farmed seafood.

“Eating local, you're already eliminating the need to air-cargo something from another part of the world, so that's a huge thing,” says Krista Greer, who co-authored the Sea Around Us study.

“And eating what's in season – you're avoiding things having to be held in freezer containers and refrigerators.”

One innovation that addresses sustainability issues both for fish and fishers is marketing locally harvested seafood directly to consumers.

Vancouver's Skipper Otto works with 18 “fisher families” in B.C. who provide their catch to consumers through a subscription service. Subscribers buy allotments of seafood upfront, and get a share of that year's catch of salmon, halibut, tuna, lingcod

and shellfish. Subscribers know that the seafood they buy is locally caught, and provides a stable income for small, independent boat owners.

“There’s a massive carbon contribution from global seafood that comes from all over the world and gets flown here, and then it changes hands dozens of times, so you’ve got dozens of people taking a margin on that fish,” says Skipper Otto co-founder and CEO Sonia Strobel. “That means that, necessarily, we’re pushing down the price paid to producers.”

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