

MARCH 8, 2013

VANCOUVER SUN

Time to move fish farms onto land? Federal report says it should be explored

BY RANDY SHORE



The first smolts will be transferred into the K'udas facility on the 'Namgis First Nation near Port McNeill this month. The closed containment system was conceived to develop and prove land-based salmon farming technology as an alternative to ocean-based net-pen farms.

Canada should support the development and expansion of closed containment salmon farming and explore transitioning the aquaculture industry away from ocean-based net pens, according to a committee report tabled in the House of Commons Thursday.

A high-tech, environmentally friendly land-based industry could be a significant economic driver in rural and first nations communities, according to the report of the Standing Committee on Fisheries and Oceans.

But while the report promotes closed containment systems as a technology of the future, it leaves the door open to the continued growth of the existing ocean-based salmon farming industry, dismissing evidence of environmental damage caused by open net-pen fish farms as "inconclusive."

Industry members testified that a forced or legislated transition from ocean-based farming to closed containment systems that are not yet proven to be profitable would be a disaster for the industry in Canada and the 15,000 direct and indirect jobs it already supports.

It is “physically impossible” to move 40,000 tonnes of production on to land, according to Ruth Salmon, executive director of the Canadian Aquaculture Industry Alliance. “The industry would look at operations elsewhere if that were mandated,” she told the committee.

The committee heard extensive testimony about the environmental impacts of ocean-based net-pen aquaculture, including sea lice infestation, viral disease, pesticide use and fish waste pollution and their impact on wild salmon stocks, but the report takes no position on the veracity of those claims.

The Coastal Alliance for Aquaculture Reform — a consortium of seven environmental organizations including the David Suzuki Foundation, Living Oceans Society and the Georgia Strait Alliance — expressed concern that the report glosses over the potential harmful impacts of net-pen farming.

Last fall’s report from Justice Bruce Cohen on the collapse of B.C.’s Fraser River sockeye stated that net-pen farms could inflict “serious or irreversible” harm to wild salmon.

“We should take these risks very seriously,” said Karen Wristen of Living Oceans. “There seems to be an underlying presumption in the report that net-pens are not only going to continue, but increase their capacity and number.”

Ocean-based farms have made huge advances in managing fish health and sea lice, said Mary Ellen Walling, executive director of the B.C. Salmon Farmers Association.

“Closed containment is trying to fix a problem that may or may not exist,” she said.

The extra expenses associated with closed containment systems ensure that land-raised Atlantic salmon will remain a premium-priced niche product for the foreseeable future, she said. Virtually all farmed salmon are Atlantic salmon because they grow bigger and are more docile.

“Our members understand the opportunities and challenges associated with land-based systems, the salmon we raise spend one third of their lives in closed containment,” she said.

Closed containment systems require a huge capital investment, inexpensive land, very cheap energy and fresh water in abundance, which combine to make it unlikely to replace ocean-based salmon aquaculture, she said.

Commercial-scale systems for rearing Atlantic salmon to maturity are still in their infancy, but four such facilities are either under construction or just starting production, one in each of Chile, Denmark and the eastern U.S., and the K’udas Project on northern Vancouver Island.

The K'udas Project is funded through a combination of government and philanthropic contributions from the charitable foundation Tides Canada, government innovation fund Sustainable Development and Technology Canada (SDTC), the 'Namgis First Nation and others.

The project was conceived to develop and prove land-based salmon farming technology as an alternative to ocean-based net-pen farms, according to Tides Canada spokeswoman Catherine Emrick.

Emrick is optimistic that the committee's recommendation that SDTC facilitate further research on sustainable closed containment technology will accelerate the process started by Tides Canada.

The first smolts will be transferred into the \$7.5-million K'udas facility on the 'Namgis First Nation near Port McNeill this month, according to project spokeswoman Jackie Hildering.

"We are at the point where we can prove that this can be done," she said. "We will let the salmon speak."

The first cohort of Atlantic salmon will take 12 to 15 months to grow to maturity, roughly half the time required in net-pens.

Expanding the 'Namgis facility to achieve production of 2,500 tonnes a year will cost another \$22 million, bringing the total cost to \$30 million, compared with a Fisheries and Oceans estimate of about \$5 million to outfit a net-pen operation.

But closed containment systems can achieve higher growth rates, more efficient use of feed and protection from disease and bad weather, reducing business risk, Hildering said.

"The report clearly acknowledges the potential of closed containment to reduce environmental impacts, business risk and improve socio-economic outcomes," said Hildering. "The recommendations, while cautious, do steer the industry toward closed containment."

Experimental closed containment systems produce Atlantic salmon with superior flavour and texture that will fetch a higher price in the marketplace, according to research done by local seafood wholesaler Albion Fisheries.

Potential off flavours are controlled by taking the fish off their feed and placing them in fresh water before harvesting, a technique pioneered by American researchers at the Freshwater Institute, an adviser to the 'Namgis salmon farm.

Commercially raised coho grown in inland fresh water tanks in Washington State sell at a premium to wild fish in Overwaitea stores and carry a Monterey Bay Aquarium sustainability certification as well as a recommendation from Greenpeace.

The report recommends:

- The federal government establish a university-based centre for excellence to maintain Canada's technological advantage in the industry and expand use of such systems.
- The government encourage economic growth through the development of aquaculture operations, including closed containment technologies.
- The government encourage public and private financial support to develop and commercialize closed containment technologies or other innovative aquaculture technologies.

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