

## INTRAFISH ARTICLE TEXT

(Scraped from Facebook BC Mariners discussion group)

### **The Critics Are Right: it's time to 'close down' salmon farms**

It will take time and significant investment, but declining fish health is pushing the industry in one, undeniable direction.

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A rash of stunningly bad news on sea lice should have salmon farmers around the world, not just northern Norway, scrambling for solutions.

Even before sea lice counts hit record levels this year in Norway, financial losses from lice in the global salmon farming industry were astronomical. It's certain that 2024 will show a new high-water mark.

The high lice load, attributed to higher-than-normal water temperatures, follows just a few months after lower-than-normal water temperatures led to some of the worst outbreaks of winter sores, again costing the industry hundreds of millions of dollars. Add jellyfish attacks and other diseases to the mix, and it becomes clear why salmon mortality in Norway hit record levels in 2023.

Norway, of course, is not alone in facing biological challenges. Every major salmon farming region is facing a mix of the above or other climate-related challenges, such as harmful algal blooms. It's a remarkable testimony to the financial health of the salmon farming industry that it continues to be extremely profitable despite these huge losses.

That could, in fact, be part of the problem – the losses simply might not hurt enough. With increasing restrictions and scrutiny, though, it's unlikely the industry can continue indefinitely to farm in the way that it has.

Any business facing so many variables needs to gain more control. Consensus is growing that the best way for the salmon industry to secure that control is by moving toward semi-closed or closed-containment

systems – a view shared earlier this year by a former CEO of Mowi, the world’s largest salmon producer.

The transition will cost hundreds of millions of dollars, and it will take a long time – but the sooner the industry starts investing, the less it will cost in the long run.

Not surprisingly, companies manufacturing semi-closed and closed-containment systems are receiving more enquiries than ever before. The head of one such supplier, FiiZK Group, told IntraFish that the challenges in Norway this year had sparked an unprecedented level of interest.

“They want to see these solutions,” FiiZK CEO Jan Erik Kvingedal said in a recent interview.

While his company would, of course, benefit handsomely from an industry transition to closed or semi-closed systems, Kvingedal stops short of advocating a complete overhaul. Instead, he hopes the salmon sector will take steady steps toward change.

“We see that the discussion has become 'open' or 'closed', but we’re more in the middle,” Kvingedal said.

FiiZK is pushing clients toward semi-closed systems for salmon in the post-smolt phase, when they first enter seawater and are more vulnerable to disease, lice and winter sores. While the company is seeing greater interest in full grow-out semi-closed and closed systems, a transition will be years in the making and may seem overwhelming to the industry, said Kvingedal.

Leroy Seafood Group wanted to test its Pipefarm concept at three different locations along the coast. The project is one of 20 that have been given the green light to farm fish by the Norwegian government.

These futuristic salmon farming concepts could radically reshape the aquaculture sector. Here's where the projects stand [graphic]

The industry doesn't need to start from scratch, though. There are more

examples of semi-closed and closed systems than you might think: Norway's ingenious development license scheme led to an outpouring of creative closed and semi-closed farming concepts, many of which are still in operation, with others ready to be financed and piloted. Every major salmon farmer in the country participated in one way or another, showing that, with the right incentives, new concepts can be tested.

Though opposition to salmon farming is by no means new, a new wave of criticism has amplified the need for the sector to display bold efforts toward improve farming methods. While critics might not be silenced completely, a commitment to testing and deploying new systems would send a strong message and buy the industry space to make the transition.

These systems will encounter failures and manufacturers must fight it out to determine which systems work best in specific environments. The sooner such systems are adopted, however, the sooner costs will fall. And if there is demand, capitalism dictates that winning companies and products will emerge.

### **The winds could be shifting for salmon farmers**

Naturally, manufacturers of these systems are the biggest proponents of change, although salmon farmers themselves are becoming increasingly vocal about their efforts to launch and test new concepts.

Perhaps the most important proponents of closed systems, however, are the companies that will finance the industry's future. Lenders have a keen eye on the sector's health troubles and social license challenges.

In a recent interview on the IntraFish Podcast, Anne Hvistendahl, global head of seafood at DNB, the world's largest lender to the salmon farming industry, was asked where she would advise the sector to put its investment dollars.

Her answer was telling: "We really like these closed compartments to do something about the sea lice and the difficulties we see in the industry."

