Scotland, Salmon, SCCS

A critical examination of the proposed 8,000-tonne semi-closed containment farm on Loch Linnhe

The Employment Reality

Industry Claims vs. Reality

Salmon Scotland claims 2,500 FTE positions, but Scottish Government data shows only 1,362 FTE in 2024—an 8% decrease from 2023, despite a 27% production increase. This decline stems from consolidation, remote monitoring, and mechanisation.

Employment is often not local, with many workers on "2 weeks on/2 weeks off" rotations, meaning income isn't spent in communities.

8%

Job Decrease

Despite production growth

27%

Production Increase

2023-2024 period

1,362

Actual FTE

Government figure for 2024

Where Does the Money Go?

Foreign Profits

Most industry profits flow to foreign companies and shareholders, with corporation tax going to the UK government rather than local communities.

Taxpayer Subsidies

Millions in taxpayer money flow annually to fish farm companies for R&D—in some years, grants even exceed company profits.

Minimal Community Benefit

Companies offer tiny community benefits as a percentage of profit, while **communities deal with negative environmental impacts and job displacement**.

Economic Contribution: The Full Picture

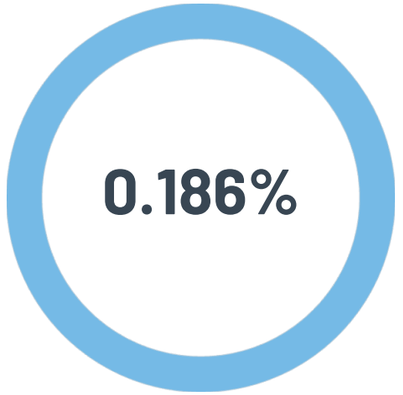
Salmon Farming's Modest Impact

Direct GVA from salmon farming: £231.2m (2024). In 2021, aquaculture's total GVA was £472 million—just 0.31% of Scotland's total GVA. **Salmon farming contributed approximately 0.186% of Scotland's total GVA**.

Wild Salmon: A Threatened Alternative

Wild salmon fishing contributed £79.9m GVA (2017) and employed 4,300 FTE directly and indirectly. **This sector is increasingly threatened by dramatic wild salmon decline** (now on the RED endangered species list), partly attributable to fish farms, climate change, and environmental factors.

The proposed Lurignish mega farm would sit directly on the migration route of Loch Linnhe's remaining wild salmon.



Salmon Farming

Of Scotland's total GVA

Wild Salmon Jobs

FTE positions at risk

Hidden Costs to Communities

Competition for Resources

Tourism and other rural businesses struggle to compete for staff and housing from a limited pool. Many restaurants around Loch Linnhe already face staffing crises, forcing reduced hours or closures.

Inflated Job Claims

Industry employment figures in planning applications are often inflated. Many jobs won't be for locals (transport, foreign-owned vessels, remote monitoring) and many will be part-time, low-paid positions.

Boom/Bust Vulnerability

Small communities with eggs in one basket face devastating impacts. Examples: Russia's 2014 ban on Scottish salmon imports, potential US tariffs, climate-driven disease outbreaks. The threatened closure of Kyleakin's feed factory could eliminate 60 jobs.

Semi-Closed Containment: The Promised Solution?

The Scottish Government views semi-closed containment (SCC) as the answer to open-net issues: sea lice, disease, wounds, waste pollution, chemical use, escapes, plastic pollution, and unsustainable feed. Norwegian companies have experimented with this technology for years, mostly with non-commercial licenses, yielding very mixed results.

Sea Lice Problem

SCCs reduce but don't eliminate sea lice. Recent studies show lice adapt to depths below 20-25m to find hosts.

Disease Risk

Increased particle accumulation in SCCs makes them more prone to amoebic gill disease outbreaks (Norwegian study, Dec 2024).

Welfare Issues

Cold water from depth causes winter ulcers—painful open wounds that spread disease rapidly in closed systems.

Lurignish: A Perfect Storm of Risks

> **SEPA has identified Loch Linnhe as a key area where fish farms pose high risk to wild salmon due to sea lice outbreaks, diseases and fish farm escapees.**

SAMS researchers completed a 2-year study on sea lice and flows in Loch Linnhe. They found Lurignish especially vulnerable because freshwater collecting at the surface in this area pushes lice down below SCC intake levels—exactly where they can infect farmed fish.

Neighbouring farms Shuna and Lismore were recently made fallow due to extremely high mortality rates from amoebic gill disease.

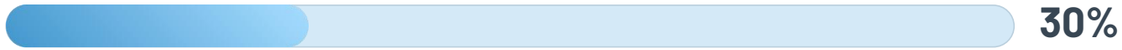
In November 2025, 75,000 salmon escaped from the nearby Gorsten Mowi salmon farm. This escape poses a significant risk to wild salmon populations due to the risk of genetic introgression.

The Pollution Reality

Broken Promises on Waste Collection

SCC providers claim 70-90% sludge collection, but actual rates are only 28-34% from land-based systems according to Norwegian data. Loch-Fjord-based systems struggle to achieve even that because of increased water flow.

An 8,000-tonne farm would be approximately 6 times larger than existing Loch Linnhe farms. With limited extraction, the extra nutrient load would be massive. **Add 100% nitrogen and phosphorus release, and the pollutive effect, together with our warming waters, becomes potentially catastrophic.**



30%

Actual Sludge Collection

vs. 70-90% claimed

100%

Nitrogen Released

Directly into the loch

6x

Size Comparison

Larger than existing farms

All chemicals used in SCCs flush directly into the loch—identical to open-net systems.

Osland Havbruk said it owns and operates the farm where the two Certus 30,000 m³ semi-closed containment cages were installed, but the cages themselves are still owned by FiiZK. Photo: FiiZK

Osland Havbruk: Strong winds caused semi-closed fish cages to break

17 November 2022

by Aslak Berge

Strong winds that accompanied a storm that visited the area of salmonid producer Osland Havbruk caused the company's two semi-closed fish cages to break and sink partially, the company said.

The accident, which occurred on Wednesday, ultimately caused 400 liters of diesel from the 30,000 m³ semi-closed cages to leak into the Sognefjord, Norway's longest fjord.
"We have had strong easterly winds. There have been winds of 10-15 meters/second and 20-30 meters/second in the casts," Marte Hatlevik, general manager of Osland Havbruk,

Climate Change and Catastrophic Risks

1

Recent Gorsten Escape

Mass escape from Loch Linnhe farm demonstrated vulnerability. **The same storm caused road closures at Lurignish from fallen trees and a 3-day power cut.**

2

Structural Vulnerability

SCCs face increased forces from currents, winds, and waves on both structure and moorings. Climate change intensifies West Coast storm frequency and severity.

3

Emergency Response Challenges

Ensuring oxygen transport and emergency power at remote Lurignish would be extremely difficult. Without power, all fish die rapidly—as occurred in a British Columbia SCC cage.

4

Unsustainable Feed

Vast wild fish quantities hoovered from poor coastal communities (West Africa) and soya from Brazil. Companies say they are reducing the percentage of wild fish in their feed, however demand has risen exponentially cancelling out any overall reduction. Mega farms like Lurignish require enormous feed volumes.

Conclusion: An Unreliable Alternative

While semi-closed containment systems are promoted as solutions to open-net salmon farming problems, **current evidence shows they only partially address challenges and introduce new risks.**

Unresolved Issues

- Sea-lice adaptation to deeper waters
- Increased gill disease susceptibility
- Welfare impacts from cold water and crowding
- Unproven sludge-collection technology (30% vs. claimed 70-90%)

New Risks

- Chemical use + discharge continues unchanged and increased
- Heightened escape risks from climate-intensified storms
- Emergency response challenges at remote locations
- Increased reliance on unsustainable feed sources

> Given these limitations and the 8,000-tonne scale proposed for Lurignish, SCC technology does not yet offer a reliable or environmentally responsible alternative.