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Feeding The Future Or Eating The Ocean? The \$80 Billion Salmon Crisis

By [Felicia Jackson](#), Contributor. ⓘ I write about innovation, finance, energy, ...

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Trawl net bycatch from shrimp fishery, Sea of Cortez, Mexico. (Photo by: Mark Conlin/VW PICS/UIIG via ... [More](#)

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Beneath the placid surface of the global seafood market, a material financial risk is quietly escalating—one rooted deep within the industry's supply chain. It's not [climate volatility](#) or controversies over environmental, social, and governance initiatives. However, the trouble lies in the fragile economics of what we're feeding our farmed fish.

A [new report](#) from the FAIRR Initiative—an \$80 trillion-backed investor network focused on ESG risks in protein production—exposes a growing contradiction at the heart of the global salmon farming industry. The sector markets itself as sustainable yet increasingly relies on a shrinking, finite resource—wild fish—for its survival.

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Released ahead of the 2025 UN Ocean Conference, the report follows a four-year engagement with seven of the world’s largest publicly listed salmon producers and delivers a stark warning: without urgent reform, the industry’s feed supply chain could buckle under its own expansion.

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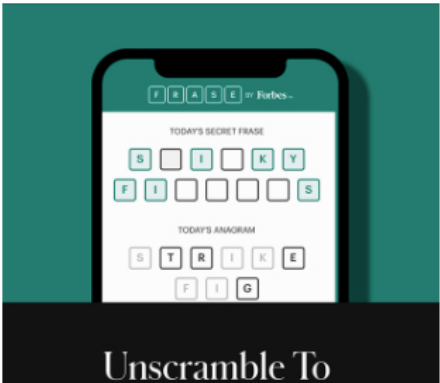
These companies represent 58% of global farmed salmon production, with over 1.2 million tonnes produced in 2023. FAIRR’s analysis reveals systemic environmental, regulatory, and financial risks tied to dependence on wild-caught fish, exposing a deep disconnect between sustainability claims and operational reality.

Supply Chain Risk From Finite Fish Resources

The industry’s dependence on fishmeal and fish oil, both derived from wild-caught fish, is a growing vulnerability. According to the UN Food and Agriculture Organization, 90% of global fisheries are already overexploited or at capacity. Yet salmon producers continue to lean heavily on this strained input to support projected production increases of 40% by 2033.

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In 2023, when Peru cancelled its anchovy fishing season, fish oil prices [surged by 107%](#). Mowi, the world's largest salmon producer, reported a 70% rise in feed costs between 2021 and 2023 due to that single event. Some companies temporarily switched to algae oil during the price spike, only to revert once fisheries opened—highlighting a reactive approach that favors short-term cost savings over long-term resilience.

“We are relying on a finite input to fuel infinite growth projections,” Laure Boissat, Oceans Programme Manager at FAIRR, told me in an interview. “That’s not resilience—it’s a recipe for collapse.”

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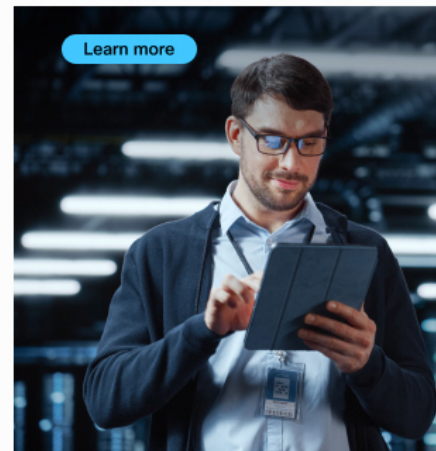
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We're Literally Feeding Fish To Fish

Between 2020 and 2024, five of the seven companies in FAIRR's study increased their absolute use of FMFO made from whole wild fish—by as much as 39%. Despite sustainability claims, only three firms reduced the proportion of FMFO in their feed, and none by more than three percentage points.



In response, many companies have turned to fish trimmings—by-products from fish processing—as an alternative. While six producers have increased their use, the supply is inherently limited. One company reported purchasing all available trimmings in its operating region, raising concerns that rising demand could incentivize additional fishing.

This exposes a fundamental flaw in the industry’s growth narrative. Farmed salmon production is projected to grow by 40% by 2033, yet fishmeal and fish oil production is forecast **to rise by only 9% and 12% respectively** over roughly the same period, according to United Nations data. These numbers are irreconcilable. Without scalable alternatives, or a drastic shift in feed formulation, the industry’s expansion plans appear unsustainable.

FAIRR’s report notes that none of the seven companies assessed have set absolute reduction targets for fish-based feed, even as five aim to scale up salmon output. This disconnect exposes investors to long-term risk: if feed supply can’t match industry growth, either costs will skyrocket, margins will shrink, or the environmental impact will intensify.

Feed Frenzy: The Domino Effect Across Industries

This feed dependency has broader implications. Aquafeed producers face rising costs and raw material uncertainty. The pet food industry, reliant on salmon oil and trimmings, is also vulnerable to volatility. As wild fish availability declines, disruptions in one part of the supply chain can ripple across sectors, amplifying risk.

The diversion of edible fish into feed also raises ethical concerns. Over 90% of fish used in FMFO could be eaten by people. Feedback’s **Blue Empire** report found that in 2020, Norwegian salmon farms used nearly 2 million tonnes of wild-caught fish for feed, including up to 144,000 tonnes harvested off West Africa, enough to feed 2.5 to 4 million people for a year.

Novel ingredients like insect meal, algae oil, and single-cell proteins were once seen as game-changers. Four years later, their use remains limited as challenges abound including high production costs, scalability issues, nutritional limitations, and consumer skepticism. Only three companies have set targets to increase their inclusion, which average just 4%. One aims for 10–

15% by 2030—a modest target given the urgent need for action.

“In essence, the sector is stalling,” said Boissat. “There’s no silver bullet ingredient on the horizon. What we’re seeing instead is short-term thinking packaged as long-term strategy.”

Investors Sound The Alarm

FAIRR’s report quantifies a growing financial risk. Feed price volatility, as demonstrated by the Peru example, threatens margins across the sector. That being the case, it’s arguable that the salmon industry’s dependence on wild-caught fish is not just environmentally unsustainable—it’s economically reckless.

“As investors, we believe the aquaculture industry must shift towards sustainable feed solutions. Diversifying feed ingredients is not only an environmental imperative, but also a strategic necessity for long-term resilience,” Thekla Swart of FAIRR participant Steyler Ethik Bank said in a press statement.

Salmon producers often lead the protein sector in disclosure, but FAIRR warns that transparency alone is not enough. “Companies disclose intensity-based metrics, but those don’t show the absolute pressure on fish stocks,” Boissat explained. “This is the gap between reporting and reality—the system is unsustainable even as it appears progressive on paper.”

A Fork in the Water: From Carnivores To Mussels?

FAIRR’s recommendations are clear. Companies should set absolute reduction rather than efficiency targets for FMFO and invest in scalable alternative feed ingredients—but deeper transformation may be needed.

That means shifting away from carnivorous species like salmon toward unfed aquaculture options—such as mussels and oysters—which require no external feed inputs. FAIRR also encourages exploration of plant-based seafood, mirroring moves by the meat industry into alternative proteins.

“Fed aquaculture is simply inefficient,” Boissat emphasized. “We must rethink what seafood production looks like in the 21st century.”

The Ocean Governance Challenge

FAIRR’s report arrives ahead of June’s UN Ocean Conference in Nice, where global leaders will gather to address ocean sustainability. A key issue is the gap between marine protection policy and practice.

Many marine protected areas still allow bottom trawling and industrial fishing, undermining conservation goals. “Even in protected waters, the absence of enforceable restrictions allows destructive practices to persist,” said Boissat. “Until regulation

catches up with science, these so-called protections offer a false sense of security—for ecosystems and for markets.”

Campaigners and investors hope the conference will lead to stronger governance—not just symbolic declarations. Without enforceable protections, risks to marine biodiversity and the industries that depend on it will only grow.

Feeding on the Future: The Aquaculture Dilemma

Stakeholders must decide: continue with business as usual, risking biodiversity collapse, food insecurity, and supply chain disruption—or rethink how the aquaculture sector operates.

“The industry has been talking about risk and resilience for years,” said Boissat. “But if your entire business model is based on a disappearing input, that’s not resilience. That’s denial.”

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