



THE FISH OIL SUPPLY DISRUPTION:

Moving from a Cyclical Supply Issue
to a Structural Supply Challenge

Overview

The global omega-3 industry is experiencing unprecedented challenges. The fish oil category, the foundation of the majority of every omega-3 supplement, pharmaceutical, and aquaculture feed formulation on the market, is facing obstacles that extend well beyond a typical market cycle.

Two major developments are unfolding simultaneously. Peru's anchovy fishery, the backbone of the global omega-3 supply chain, has experienced an approximately 90% decline in the availability of human-grade crude fish oil in 2026, driven by reduced catches, lower oil yields, quality constraints, and repeated fishing suspensions. At the same time, the emergence of a potentially severe El Niño is expected to place additional pressure on an already constrained supply.

Unlike previous supply disruptions, these converging challenges are expected to have lasting consequences across the omega-3 market, including reduced

ingredient availability, higher sourcing costs, margin pressure, reformulation challenges, and product shortages affecting manufacturers worldwide.

In the long term, global wild-caught fish catches are on a downward trend, while demand is growing simultaneously from aquaculture, dietary supplements, pharmaceutical, and pet nutrition. Aker BioMarine's modeling projects that demand might exceed supply as early as 2027, opening a potential deficit of 160,000 MT by 2031.

The implication for omega-3 brands and manufacturers is becoming clearer. Companies that diversify their EPA and DHA sourcing today will be better positioned to safeguard and strengthen their omega-3 portfolios for the future. Those that fail to adapt will risk out of stock products, delistings, and unpredictable shelf prices. This volatility can erode consumer confidence and weaken brand loyalty.



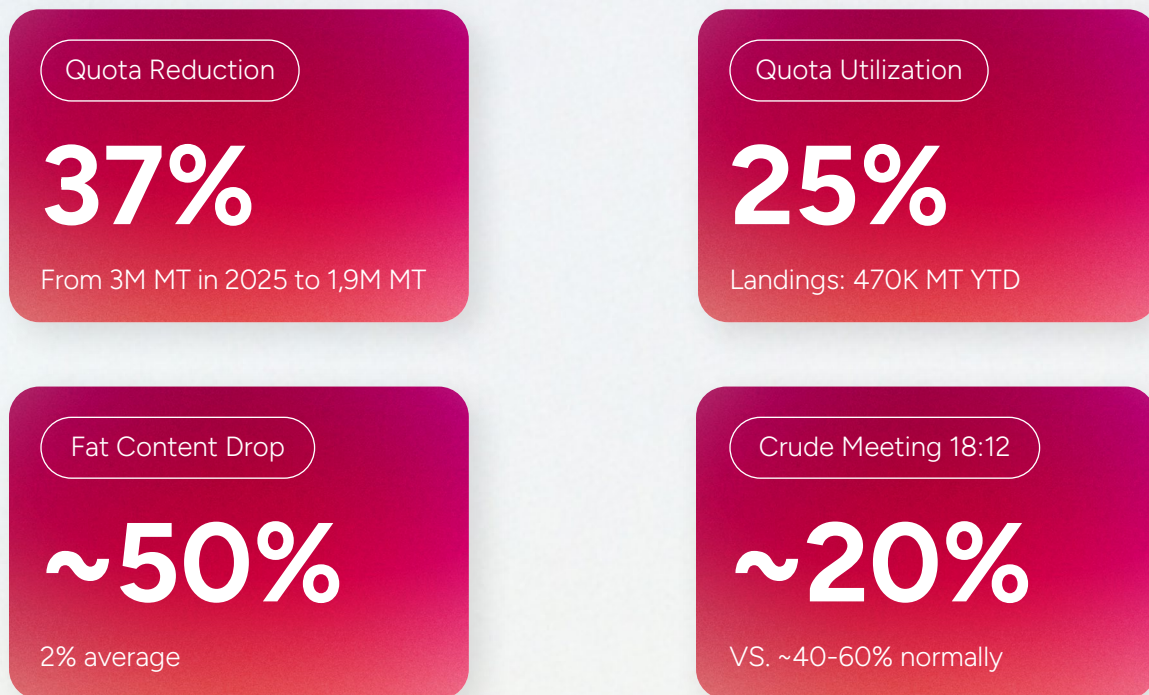
THE 2026 FISH OIL SUPPLY COLLAPSE – THE SHORT-TERM CYCLICAL SHOCK

Peru's anchovy fishery sits at the center of the global omega-3 supply chain, and a sharp decline in 2026 production, compounded by reduced catches, lower yields, and quality constraints, has dramatically constricted the availability of fish oil for human nutrition. These supply challenges are being intensified by a developing El Niño event, which is disrupting anchovy populations, driving fish oil prices to record levels, and further constraining global supply. As seen during the 2023 El Niño, these upstream pressures can translate into significant retail price increases for fish oil products.

Peru: The World's Omega-3 Engine

Peru's anchovy fishery is the single largest source of fish oil for human nutritional applications globally. It supplies roughly 50% of the crude fish oil used by refiners and concentrators serving the supplement, pharmaceutical, and food sectors. When Peru's output falls, the entire omega-3 market feels the impact.

The 2026 Season I outcome was severe across four compounding dimensions:



When combined, these four effects amplify one another, leading to greater results. Available human-grade 18:12 crude fish oil fell from approximately 85,000 MT to roughly 10,000 MT, representing a 90% reduction in commercially usable supply for the supplement and pharmaceutical sectors.

The season was halted in April-June 2026 due to a high presence of juvenile anchovies, further limiting near-term recovery potential.

El Niño: The Amplifier

El Niño is a natural climate cycle that disrupts ocean temperature and current patterns in the South Pacific, forcing anchovy populations into deeper, less accessible waters. Historical price data confirms that each El Niño event has driven crude fish oil prices to a higher peak than the previous one. From a baseline of ~\$1,700/MT in 2013, the 2023-2024 El Niño event pushed prices to ~\$8500/MT.

The current event is forecast to be more severe, with prices rising to new record highs.

By early June 2026, NOAA and other climate authorities were issuing alerts about the 2026-2027 El Niño season. The International Fishmeal and Fish Oil Organization (IFFO) had tracked that cumulative fish oil supply was already 31% below 2025 year-to-date across key producing nations (Peru, Chile, Iceland/Faroes/UK, Denmark/Norway).

Retail Impact: What the 2023 El Niño Showed

The 2023 El Niño provided a concrete preview of how climate-driven disruptions can affect omega-3 supply chains and retail pricing. Across multiple markets, fish oil products experienced notable price increases as pressure on marine ingredient supplies flowed through to manufacturers and retailers. In some monitored retail channels, leading fish oil SKUs recorded double-digit price increases, with certain products rising by more than 50%. Price movements of this magnitude can create consumer uncertainty within the category, affect purchasing decisions, and reduce willingness to try new products.

By contrast, krill oil products generally demonstrated greater price stability during the same period. In several retail markets, leading krill oil SKUs saw little to no price movement, with increases remaining minimal compared with fish oil products. This pricing resilience represents a commercial advantage for brands that offer krill oil alongside – or as an alternative to – fish oil, helping maintain category stability and consumer confidence during periods of supply-chain volatility.

THE LONG-TERM STRUCTURAL CHALLENGE

A Declining Wild-Catch Resource Base

The fish stocks traditionally relied on for fish oil and fish meal production are yielding smaller catches worldwide, reflecting a clear long-term downward trend. Decades of climate variability, fishing pressure, and ecosystem change have reduced global catches from more than 30 million metric tons (MT) in the mid-1990s to less than 25 million MT today, with long-term trends indicating further declines.

El Niño events tend to disrupt fish supply, and this has showed up in historical data for Peruvian anchoveta catches since the 1990's.

Depleted Strategic Stocks

Following the 2023 El Niño, many refiners and concentrators did not rebuild inventory to pre-2023 levels, and as a result, the industry entered 2026 with thinner buffers.

The question in previous cycles was: "At what price can I secure supply?"

In 2026, the question is no longer about pricing and the willingness to pay. It's about inventory.



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The world needs more EPA and DHA, not less. Populations are growing, people are living longer, and the demand for preventive nutrition continues to increase. At the same time, omega-3s are gaining relevance across emerging health and wellness categories, while ongoing scientific research continues to strengthen the evidence supporting the role of EPA and DHA in a wide range of health applications.

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Simon Seward, CEO
Human Health Ingredients, Aker BioMarine

El Niño events disrupt fish supply, and this has showed up in historical data for Peruvian anchoveta catches since the 1990's.



Structural Demand Growth Across Five Vectors

Even as supply faces decline, the demand for EPA and DHA is growing in various areas:

Aquaculture Expansion

Atlantic salmon harvest grew 36% from 2015 to 2025, reaching 3.1M MT. The OECD-FAO Agricultural Outlook (July 2025) projects +26% further growth in salmonoids over the next decade. Fish oil inclusion rates in aquafeed – which fell ~73% from 2002 to 2025 – have now bottomed. Below a certain omega-3 threshold, fish health deteriorates. The trend is expected to reverse upward, meaning aquaculture will require more fish oil per tonne of fish produced. Aquaculture already consumes 80% of all fish oil produced globally (960K MT of 1.2M MT total supply).

Aging Population Demographics

The global 65+ population is projected to double by 2050, driving sustained and growing demand for cardiovascular, joint, cognitive, and eye health support, all established omega-3 benefit areas with clinical backing.

GLP-1 Drug Adjacency and Pharma Rx Omega-3

GLP-1 agonists are generating a substantial adjacent supplement market. Today, omega-3 supplementation is increasingly recommended alongside GLP-1 therapy, a clinical trend that is occurring in parallel with the expansion of pharmaceutical Rx omega-3 markets, including Chinese reimbursement of Rx omega-3, which represents a potentially significant new source of crude fish oil demand.

China and APAC Middle-Class Expansion

Expanding middle classes across China, Southeast Asia, and APAC are driving the dietary supplements market. Among all markets surveyed, consumers in China are the most likely to switch to krill oil (45%), suggesting strong growth potential for omega-3 supplements beyond traditional fish oil.

Pet Food Boom

Pet supplement launches have more than doubled over the past decade, with omega-3 being among the fastest-growing categories.

The Supply-Demand Crossover

Aker BioMarine's 2021–2031 global fish oil market model projects that supply will remain relatively flat at around 1.2 million metric tons, with temporary dips during El Niño years.

At the same time, demand is expected to steadily increase, driven by growth in aquaculture (~3% per year), dietary supplements (~3% per year), and pet food (~4% per year).

As a result, global demand could begin to exceed supply as early as 2027. By 2031, the shortfall could reach about 160,000 metric tons, roughly 13% of total demand under baseline assumptions.

Potential deficit of

160.00 MT

in supply by 2031

SOLUTIONS: BUILDING SUPPLY RESILIENCE

The brands most likely to succeed in the next decade will not merely react to supply disruptions, they will proactively build sourcing resilience before disruptions occur.

A checklist for a resilient omega-3 supply:

- ✔ Reduce long-term exposure to supply chain disruptions
- ✔ Ensure full supply chain traceability, sustainability, and quality compliance
- ✔ Maintain competitive cost per omega-3 dose amid rising fish oil prices
- ✔ Capture portfolio synergies across existing omega-3 SKUs

Aker BioMarine’s ingredient portfolio, anchored by Superba Krill Oil and Revervia algae oil, meets these criteria.

Our Ingredients for a Differentiated, Robust Omega-3 Supply Strategy

Differentiation Criteria		
No exposure to El Niño supply risk	✔ Antarctic waters, quota only 1% of biomass	✔ Land-based production, zero ocean impact
Sufficient EPA/DHA for human supplement applications	✔ Superior bioavailability in phospholipid form	✔ Natural high DHA, EPA emerging
Full supply chain traceability from source to product	✔ All batches traceable to catch area	✔ Controlled precision fermentation process
Recognized sustainability and quality standards	✔ MSC, Unique SFP A-rating, Friend of the Sea, AWR	✔ Less sensitive due to process transparency
Competitive cost as fish oil prices rise	✔ Bioavailability and added health benefits drives competitiveness	✔ Already near parity on per unit DHA basis
Compatibility with fish oil formulations	✔ Long-standing application in blends	✔ Blends easily to increase DHA delivery

SUPERBAKrill® Superba Krill® Oil, The Natural Multi-Nutrient

Superba Krill is the world's leading and most researched krill oil ingredient delivering highly concentrated phospholipid-bound omega-3s (EPA/DHA), choline, and astaxanthin in one single ingredient. Its phospholipid form mimics human cell membranes, supporting absorption and reducing fishy reflux. It can be used alone or in blended formulations. Backed by 50+ human clinical trials and 135+ studies, it supports cardiovascular, cognitive, eye, joint, sports performance, and immune health.

Sourced from Antarctic krill, it comes from an MSC-certified, CCAMLR-managed fishery harvesting under 1% of biomass annually. With full traceability and a controlled supply chain, it offers a reliable omega-3 source unaffected by El Niño events.

Revervia® Revervia®, Premium Algae DHA

Revervia® is a microalgae-derived DHA ingredient in its natural triglyceride form (nTG), delivering high DHA potency that enables brands to develop high-strength, vegan omega-3 products with up to 250 mg DHA in a small capsule. Ideal for brain, eye, and prenatal health applications, it offers formulation flexibility as a standalone DHA solution or as part of combination products.

Produced through a low-impact, land-based fermentation process, Revervia® provides a reliable and sustainable complement to traditional marine omega-3s. It is GMO-free, allergen-free, and solvent-free, delivering consistent quality through a controlled cultivation process while ensuring a secure, predictable supply independent of fisheries, seasonal fluctuations, and wild-catch variability.

Combination Strategies for Supply Resilience

Now is the time for formulators to consider strategies that reduce reliance on any single source of EPA and DHA. One increasingly common approach is to combine omega-3 ingredients, enabling more diversified sourcing while supporting a range of positioning and formulation objectives.



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The market is telling us two things very clearly: consumers are open to alternative omega-3 sources, and options are available now. Brands that diversify with krill and algae can meet both challenges at once, strengthening supply security while aligning with evolving consumer preferences around efficacy, sustainability, and quality. In today's environment, failing to diversify carries more risk than taking the first step.

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André Eriksen, CCO
Human Health Ingredients, Aker BioMarine

Consumer Readiness

Approximately 30% of fish oil consumers say they would consider switching to krill oil, with interest rising to 44% among U.S. consumers and 45% among Chinese consumers (Potloc/Advancy survey across China, Japan, Korea, the U.S., and Europe). Importantly, once consumers adopt krill oil, loyalty tends to be high: roughly 80% rate it as the best omega-3 source they have tried and continue using it. Yet global awareness of krill oil remains only around 30%, highlighting significant headroom for category growth as brands invest in consumer education and awareness-building.

AKER BIOMARINE, YOUR TRUSTED PARTNER

Aker BioMarine is uniquely positioned to provide solutions for the nutraceutical industry during this challenging time due to its science-driven omega-3 platform that extends beyond traditional fish oil. For two decades, we have produced premium ingredients that address the growing consumer demand for effective, sustainable, and innovative health solutions.

As the world's second-largest supplier of omega-3 nutraceuticals, and the largest player outside the traditional fish oil value chain, Aker BioMarine holds 85% value share of the global krill oil market and serves customers in 60+ countries.

From harvesting and refining to ingredient production, Aker BioMarine is the only krill supplier that controls critical steps of the supply chain, from Antarctic harvesting through on-vessel extraction, quality testing, and global distribution.

With 135+ published scientific studies and current leadership of the GOED omega-3 council, Aker BioMarine is both a commercial and scientific leader in the omega-3 category.

#2

**Omega-3
nutraceutical
Supplier**

By global market
position

#1

Outside Fish oil
Largest non-fish
omega-3 source

85%

**Global krill oil
value share**
As of 2026

60+

Countries served
With local
commercial teams



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In an environment defined by uncertainty, preparedness is a must. Equally important is selecting the right partner – one who not only helps you navigate industry disruption, but also accelerates adaptation, strengthens operational stability, and supports sustained growth. As markets become more complex, the strength in your partnerships may prove to be one of the most significant competitive advantages you can build.

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Matts Johansen, CEO
Aker BioMarine

Data Sources

IFFO (International Fishmeal and Fish Oil Organisation) | YTD production data, June 2026
GOED (Global Organization for EPA and DHA Omega-3s) | market structure and supply/demand data
Cargill presentation, GOED Exchange 2026 | aquaculture inclusion rates; Atlantic salmon harvest data
TASA / GOED presentation | Peruvian quota and catch data, Season I 2026
SeaFood Source, June 1, 2026 | fat content and crude oil profile data
Hammersmith Reports | crude fish oil price series 2013-2026
Quick TABS Rankings, Walmart (period ending 07/01/2023, last 24 weeks) | shelf price impact data
UN World Population Prospects 2024 | demographic demand projections
IQVIA, April 2026 | pharmaceutical omega-3 market
Innova Market Insight | pet supplement launch trends

Grand View Research | global omega-3 ingredient market CAGR (2024-2027: 3.8%)

Potloc Survey / Advancy Analysis | consumer awareness and switching intent (CN, JP, KR, US, Europe)

Akvafakta, Kontali, FAO | Atlantic salmon production data and forecasts

OECD-FAO Agricultural Outlook, July 2025 | salmonoid production projections

Aker BioMarine internal model | 2021-2031 global fish oil supply/demand simulation

MSC, CCAMLR | krill fishery certification and biomass management data

All projections and simulation outputs are Aker BioMarine estimates based on publicly available data and internal modeling. Actual outcomes may vary materially from projections. This document is prepared for informational purposes for B2B commercial partners and does not constitute financial advice.