Blue Revolution Fund

PORTFOLIO IMPACT REPORT 2025

FUND MANAGER

HATCH
Blue Revolution Fund

CONSERVATION MANAGER

The Nature Conservancy

CONTENTS

LEADERSHIP PERSPECTIVE

The Blue Revolution Fund (BRF) is an impact investing fund created by Hatch Blue in collaboration with The Nature Conservancy (TNC), as Conservation Manager, to help build a more sustainable, resilient, and equitable global food system by advancing the next generation of sustainable aquaculture. By demonstrating how targeted investment can drive measurable environmental and social outcomes, BRF seeks to chart a new path for how impact capital engages with the food systems of the future.

It is in this spirit that I am proud to share the **Blue Revolution Fund's 2025 Portfolio Impact Report**, reflecting our first full year of activity following the fund's final close in 2024.

The aquaculture industry continues to adopt new technologies that improve efficiency and performance across the supply chain. These innovations have the potential to meaningfully improve operational efficiency and reduce impacts, supporting a more sustainable sector.

Alongside these advances in conventional production, there is growing recognition of the value of restorative and regenerative aquaculture. BRF aims to demonstrate how aquaculture can contribute to conservation efforts, create thriving habitats, and strengthen coastal socio-economic systems.

This momentum is reflected internationally, including the 2025 inauguration of the Mediterranean Restorative Aquaculture Demonstration Center in La Rápita, Spain.[1] Established by the UN FAO's General Fisheries Commission for the Mediterranean, the Catalan Ministry of Climate Action, Food and Rural Agenda, and the Institute of Agrifood Research and Technology, the center serves as a hub for research and training. With a focus on macroalgae, bivalves, and other invertebrate species, the initiative highlights the nexus of technology, ecosystem restoration and resilience, regenerative food systems, and climate adaptation.

We are encouraged by this progress and remain committed to supporting technological innovation and advancing the role of restorative and regenerative aquaculture in global food systems and environmental and social resilience.

Sincerely,

TAYLOR VOORHEES
CHAIR, BRF IMPACT COMMITTEE

1 Aquafeed.com | Mediterranean Restorative Aquaculture Center opens in Spain

Cover: © Jennifer Emerling; This page: (left) Seagrass in Chesapeake Bay © Lisa Tucker/TNC; (above) Taylor Voorhees © TNC

BLUE REVOLUTION FUND:

Meeting the Demand for Sustainable Seafood

Seafood plays a significant role in global protein demand, accounting for about 14% of the average person's daily protein intake worldwide, according to Our World in Data[2]. Yet wild fisheries are reaching their limits: according to the United Nations Food and Agriculture Organization (FAO) report "The State of World Fisheries and Aquaculture 2024", 50% of assessed stocks are fished at their maximum sustainable level, and 38% are overfished. With nearly 90% of reported global wild fish stocks at or beyond their sustainable limit, aquaculture can play a meaningful role in meeting future seafood demand while taking pressure off wild fish populations.

Research conducted by TNC and Encourage Capital, published in 2019 in "Towards a Blue Revolution," showed that aquaculture can provide protein more sustainably for a growing global population and, in some cases, help restore marine ecosystems. Yet many impact-focused investors were hesitant to enter the sector due to limited frameworks for assessing its environmental risks. To address this gap, the BRF was launched in 2022 to develop a blueprint for investing in sustainable aquaculture.

Feeding a Growing Global Population

Much of the conversation around investing in sustainable aquaculture centers on the growing global population and the rising need for protein. This persuasive storyline fits well within the suggested definition of the Blue Economy[3], and has boosted interest in the aquaculture industry which rightly warrants ongoing support and enthusiasm. However, it is crucial for the impact finance community to focus on regions expected to see population growth and on aquaculture sectors capable of meeting this increased demand.

Consider the following: while Africa's population is projected to grow faster than any other region, 75% of global Blue Economy financing between 2017 and 2021 went to Europe and Central Asia, leaving Africa with only 8% of funding. Furthermore, 81% of all Blue Economy investments targeted business development, with just 10% supporting aquatic foods.[4] These incongruities highlight the current misalignment between funding, geographic needs, and food security goals. Future investments must prioritize regenerative food systems in high-growth regions with greater transparency and accountability.

Balancing Technology and Targeted Investment

The aquaculture sector is undergoing rapid advancements driven by new technologies, from improvements in production systems to innovations that enhance feed efficiency, strengthen disease resistance, and optimize growth. These tools offer promising boosts to major seafood markets, and much of the sector's recent investment has flowed toward startups developing these technologies for large, internationally traded species like salmon and shrimp. This is an important trend, but the concentrated financing toward new technologies captures only part of the investment and impact opportunity.

Another critical part of the aquaculture sector includes primary production, especially growers and producers of regenerative species such as seaweed and bivalves. While these industries can deliver meaningful ocean ecosystem restoration, they have remained small and significantly undercapitalized. A recent Systemiq[5] study found that an estimated $2 billion USD is needed over the next five years to expand and maintain operations in these sectors. The study notes that while venture capital has effectively fueled technology development in major seafood markets, seaweed and bivalve producers need different types of capital, such as flexible debt financing, to scale responsibly.

These uneven investment patterns underscore the need for strategies that can support both innovation and production. BRF has invested largely in technologies, recognizing that it is a lynchpin in enabling the growth of primary production.

2 Based on per capita consumption in all FAO regions globally

3 The Potential of the Blue Economy Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries

4 Mapping flows of blue economy finance: Ambitious narratives, opaque actions, and social equity risks: One Earth

5 Financing regenerative seaweed and aquaculture

BLUE REVOLUTION FUND:
Impact Strategy

Impact Thesis

The vision of the BRF is to support and catalyze a global aquaculture industry that actively improves the health of the ocean, addresses the challenges of climate change, and benefits people. This guides the Fund to expand and scale aquaculture farms and technologies that actively improve ocean health and tackle climate change, thus reducing the impacts of current aquaculture farms on our oceans and providing enhanced benefits to communities.[6] The BRF seeks to set a global precedent for responsible and effective investment in aquaculture.

Impact Objectives
Improve the environmental performance of existing aquaculture farms.
Regenerate our oceans by creating sustainable aquaculture farms that remediate water pollution and rebuild fish habitat.
Provide a source of protein with fewer GHG emissions per tonne than other forms of animal protein production.
Provide a sustainable source of seafood as an alternative to overexploited wild fish stocks.
Empower coastal communities by providing a source of equitable jobs that are also nature positive.
Increased engagement by the financial sector in sustainable aquaculture.

6 There can be no assurance that the Fund will meet its investment and impact objectives

Fish sandwich made using SuperGround fish paste © SuperGround

Theory of Change

Activities

- Design and implement an impact investment vehicle that invests in aquaculture production facilities and tech innovations to deliver returns for investors and environmental and social outcomes.
- Assess the impact of the portfolio.
- Develop standardized impact measurement and disclosure systems for the aquaculture impact investment sector.

Outcomes

- Regeneration of coastal ecosystems.
- Reduced greenhouse gas emissions and water pollution from aquaculture facilities.
- Increased supply of sustainable seafood.
- Availability of equitable, consistent, reliable jobs for local communities.

System Influence

- Demonstration that sustainable aquaculture can deliver competitive returns attracts more investment capital into the sector.
- Increased funding and capital flows into sustainable and regenerative aquaculture, associated technologies, and supply chains.

Investment Types Targeted by the BRF

Investment Category	Example Portfolio Company
Next-generation aquaculture systems	Land-based recirculating fish, bivalve, and/or seaweed production
	Innovative offshore fish production that minimizes waste
Regenerative aquaculture farms	Seaweed production, processing, and markets to provide social and/or ecosystem services
	Bivalve production to provide social and/or ecosystem services
Technologies that reduce negative environmental impacts of conventional aquaculture	Biomass estimators to improve efficiency of fish production in aquaculture systems
	Oxygenation to improve water quality and fish health in aquaculture systems
	Transparency/traceability software to improve sustainability throughout supply chains
Technologies that address nutritional and animal health challenges in aquaculture production	Vaccines to improve animal health and welfare
	Alternative antimicrobials to ensure animal health and welfare while avoiding challenges associated with antibiotic use
Solutions that reduce environmental impact of ingredients used in aquaculture feed	Lower-impact aquafeed ingredients that avoid or minimize land conversion, GHG emissions, and freshwater use
	Plant-based seafood that provides nutrition using lower-impact ingredients
	Efficient processing (e.g., use of processing side streams for aquaculture feed ingredients, valorisation of aquaculture processing waste)

Impact Metrics

TNC and Hatch designed the BRF Impact Metrics and established quantified targets aiming for ambitious yet realistic and measurable results. TNC provides science-based guidance to BRF's portfolio companies and incorporates best practices for measuring impact.

In 2025, BRF underwent a process to update and clarify impact measurement methodologies in order to align with the most recent practices and scientific findings in the aquaculture sector. The current portfolio is projected to overperform in the Avoided greenhouse gas emissions metric, however it is not projected to meet the remaining impact targets, primarily because the targets assumed a portfolio of primary production farms, whereas the portfolio to date consists largely of technology innovation companies. Reassessment of the impact measurement methodologies provides support and guidance for continued pipeline development and follow-on investments.

BRF Impact Metric	Target	Achieved to Date	Projected Achievement of Current Portfolio	Projected Achievement of Current Portfolio (%)
Area of ocean that will have better water quality or habitat due to improved aquaculture operations	500,000 ha	1,301	16,720	4%
Footprint of new habitat established as a result of regenerative aquaculture farms	640 ha	0	16	3%
Nitrogen removed or avoided from coastal waterways	2.7 million kg	0	16,636	1%
Avoided greenhouse gas emissions	1.2 million mt CO_2 equivalents	141,513	2,945,679	246%
Portions of sustainable seafood added to the market associated with BRF investments	500 million portions	803,246	92,024,585	18%
Jobs created or improved	3,200 jobs	163	65	5%

Planktonic barnacle collection © Planktonic

Essential Requirements for BRF Investments

The Impact Manager and the Impact Committee assess each investment to seek to avoid, minimize, or mitigate negative environmental and social impacts. All companies must meet the following essential requirements, as applicable. Additionally, each BRF investment must contribute to one or more of BRF's portfolio-wide impact metrics.

Topic	Essential Requirements for Each BRF Investment
Company capacity	Develop and implement adequate **resources, policies, expertise, and strategy** to operate in an environmentally and socially sustainable way.
Company ethics	**Avoid unethical practices** within the company and supply chain as well as in interactions with affected communities and demographics.
Source of fry/raw materials	**Avoid or minimize reliance on wild fisheries** or unsustainable raw material production.
Escapes/genetic interactions	Avoid, minimize, and/or mitigate **escape events and genetic interactions** between farmed animals and wild populations.
Macrofaunal interactions	Avoid, minimize, and/or mitigate **negative interactions with wildlife populations**, especially at-risk populations.
Feed use	Maximize **feed efficiency and resource use** on farms.
Habitat	Avoid, minimize, and/or mitigate any **impacts to habitat surrounding farms** or affected by supply chain operations.
Water column	Avoid, minimize, and/or mitigate any negative **water quality impacts**.
Disease/chemical use/biosecurity	Maintain animal health and welfare to avoid, minimize, and/or mitigate **impacts from disease**.
Freshwater use	Ensure efficient and sustainable use of **freshwater resources**.
Land use	Avoid direct **land use change** for aquaculture operations and minimize it in the supply chain.
Energy use/GHG emissions	Minimize **greenhouse gas emissions** by improving efficiency and transitioning to clean energy.

From top: Aquaculture farm site © Hatch Blue; Autonomous cleaning robot © Remora Robotics; Planktonic CryoPlankton frozen barnacle nauplii feed © Planktonic

BRF Influence Beyond Impact Targets

In 2025, BRF began preparing its impact management tools and guidance to be released for use by investors. The primary materials intended for release include the pre-investment diligence review frameworks for:

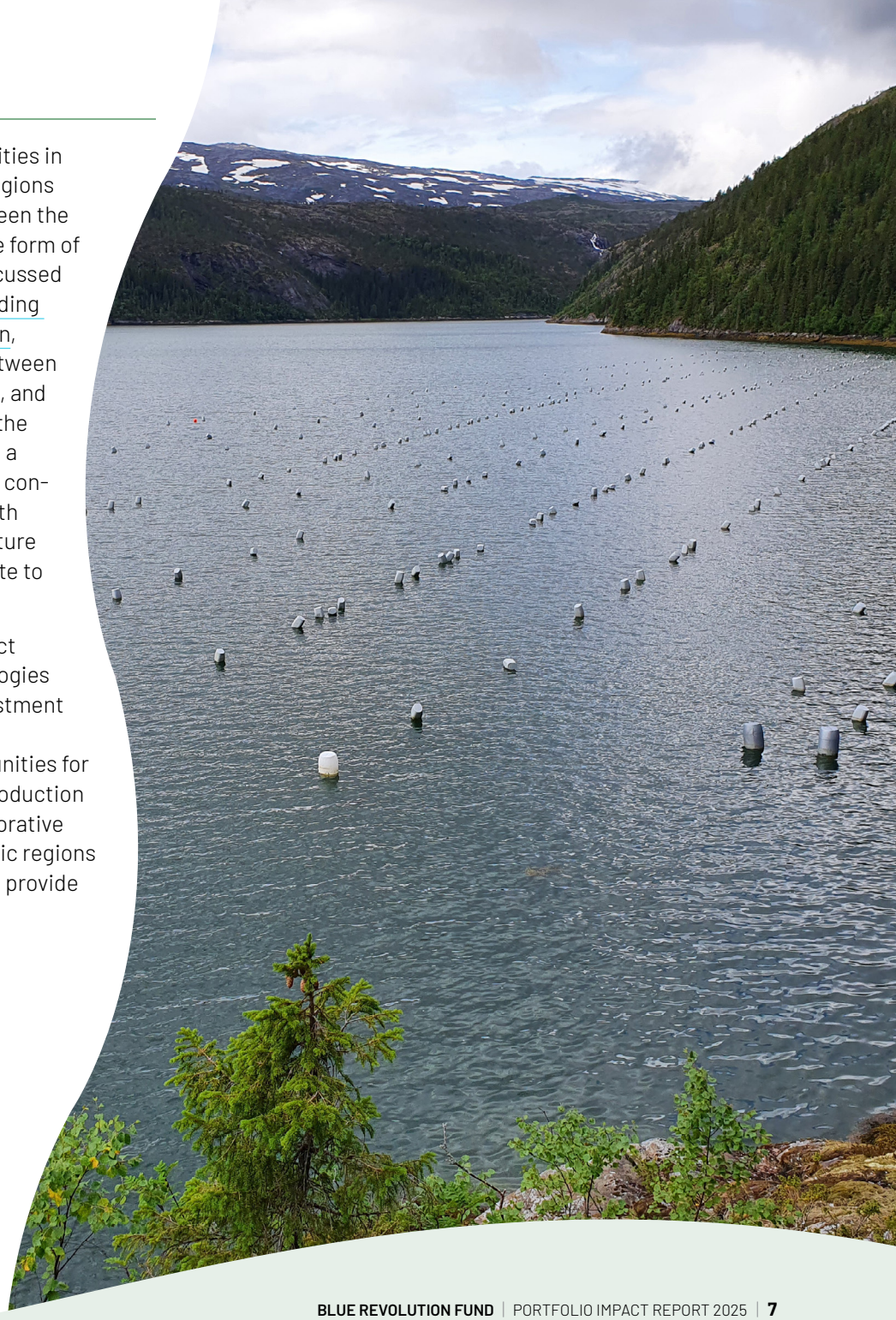
- Seaweed and bivalve aquaculture
- Offshore aquaculture
- Land-based aquaculture
- Aquaculture-supporting technology companies

The release of these tools aims to provide impact-focused investors with guidance for investing in the aquaculture sector, raising confidence in their ability to comprehensively assess the potential environmental outcomes associated with an investment.

To further engage the impact finance community and support increased funding and capital flows into sustainable and regenerative aquaculture, TNC and Hatch Blue intend to continue to assess lessons learned from BRF and share findings with the aquaculture and investment sectors. For example, the reassessment of impact measurement methodologies conducted in 2025 produced a robust set of findings and recommendations for applying the most current scientific practice in aquaculture to impact measurement and reporting requirements in the finance community. Multiple groups are developing systems for marine and/or aquaculture-specific impact measurement and reporting; however, methodologies and assumptions are not standardized across systems.

Additionally, findings from BRF's 2025 methodology exercise and subsequent recommendations for pipeline development can be shared with the broader impact finance community to guide investors toward opportunities in aquaculture sectors and regions that have not historically been the recipients of support in the form of impact investment. As discussed in this report's section Feeding a Growing Global Population, there is a misalignment between funding, geographic needs, and food security goals. Using the findings of these efforts as a foundation, BRF intends to continue to actively engage with external groups in aquaculture impact finance to contribute to the following:

- Standardization of impact measurement methodologies for the aquaculture investment sector
- Identification of opportunities for financing the primary production of regenerative and restorative aquaculture in geographic regions and sectors where it can provide the necessary benefits.



Planktonic barnacle culture site
© Planktonic

THE BLUE REVOLUTION FUND'S PORTFOLIO

The Blue Revolution Fund invested in seven additional companies in 2025, growing the portfolio to a total of 13 investments. By the end of the investment period in 2027, the portfolio is expected to include 15-20 companies.

Company	Headquarters	Type of investment	BRF impact metric
New School Foods	Canada	Food technology company that develops plant-based seafood alternatives	Avoided greenhouse gas emissions
			Portions of sustainable seafood added to the market
			Jobs created or improved
DeNova	Canada	Technology that replaces soy protein and fishmeal in aqua feeds with single-cell protein alternative	Avoided greenhouse gas emissions
			Jobs created or improved
Wholechain	United States	Software as a Service (SaaS) business model offering blockchain-based traceability technology for transparency throughout aquaculture supply chains	Jobs created or improved
CageEye	Norway	Technology for improving feed efficiency	Area affected by aquaculture with improved environmental performance
			Avoided greenhouse gas emissions
			Jobs created or improved
ChucaoTec	Chile	Technology for improving feed efficiency	Area affected by aquaculture with improved performance
			Avoided greenhouse gas emissions
			Jobs created or improved
Peptobiotics	Singapore	Technology for improving feed efficiency	Area affected by aquaculture with improved performance
			Avoided greenhouse gas emissions
			Jobs created or improved

Continued on next page

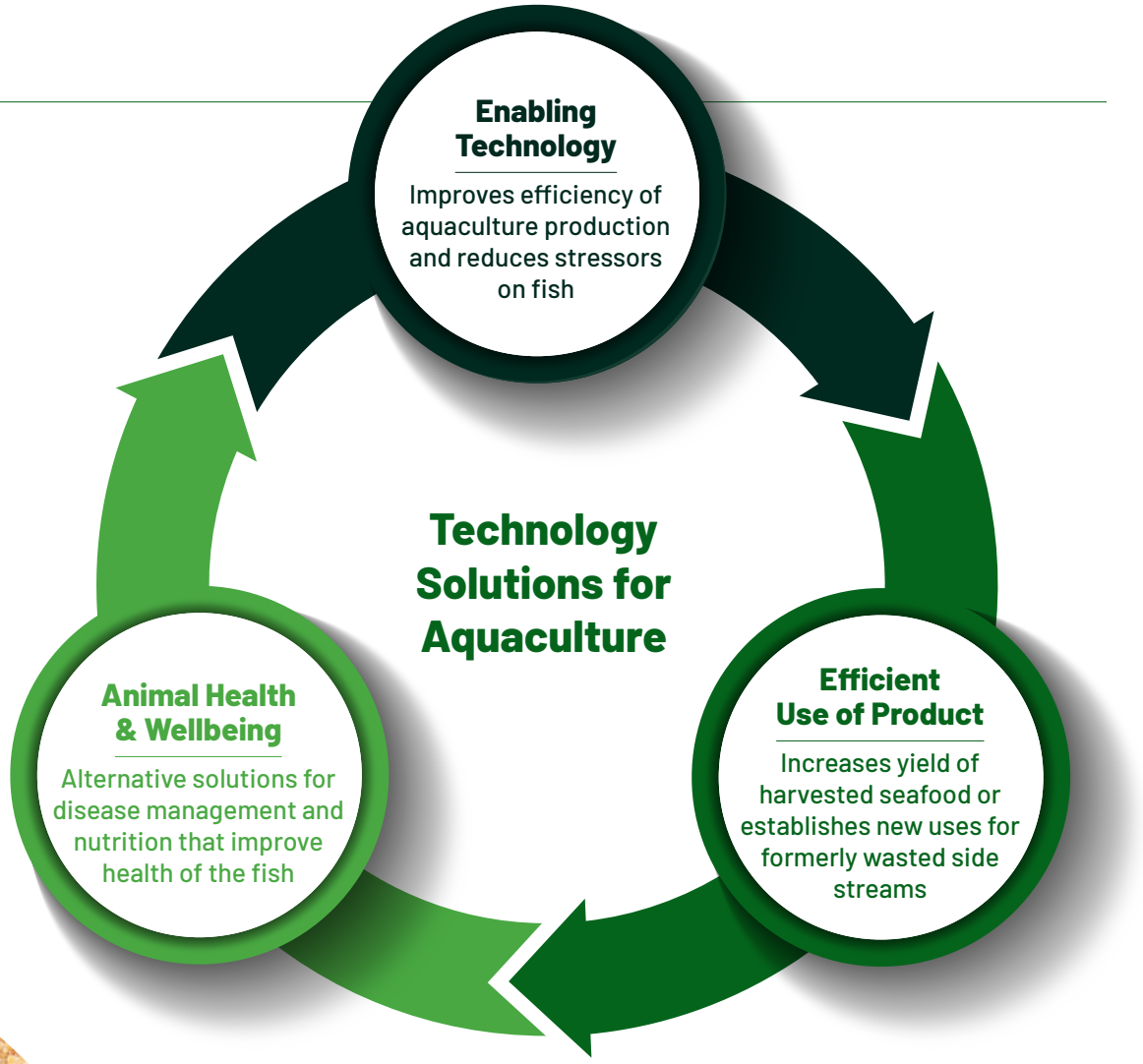
Company	Headquarters	Type of investment	BRF impact metric
Gårdsfisk	Sweden	Recirculating aquaculture systems	Portions of sustainable seafood added to the market
			Jobs created or improved
SuperGround	Finland	Technology that turns fish side streams into paste edible for human consumption	Portions of sustainable seafood added to the market
			Jobs created or improved
Remora	Norway	Technology for improving feed efficiency	Area affected by aquaculture with improved performance
			Avoided greenhouse gas emissions
			Jobs created or improved
BioSort	Norway	Technology for improving feed efficiency	Area affected by aquaculture with improved performance
			Avoided greenhouse gas emissions
			Jobs created or improved
Planktonic	Norway	Technology for improving feed efficiency	Aquaculture footprint that provides habitat for biodiversity
			Jobs created or improved
ReTyre	Norway	Tire producer that uses technology to replace traditional rubber with alternative ingredients, including seaweed biochar and oyster shells	Aquaculture footprint that provides habitat for biodiversity
			Amount of nitrogen removed or avoided from coastal waterways
			Jobs created or improved
Aviwell	France	Technology for improving feed efficiency	n/a[7]

7 Aviwell is a member of the BRF portfolio with conditional impact requirements and will require reassessment and approval by the BRF Impact Committee and Investment Committee prior to contributing to the impact metrics.

IMPACT HIGHLIGHTS 2025

Spotlight on Technology

The BRF portfolio promotes the importance of new technologies for the sustainability of the aquaculture sector. Technology companies in the BRF portfolio are developing products that improve the efficiency and sustainability of the production cycle, reduce waste in the supply chain, and address challenges in animal nutrition and health.



Fish nuggets made using SuperGround fish paste
© SuperGround

What Is Feed Conversion Ratio and Why Is It Important?

A common goal for technology in aquaculture is improving the Feed Conversion Ratio (FCR). Put simply, FCR measures how efficiently an animal converts feed into body mass. It is calculated as total feed divided by total animal weight at harvest – meaning a lower FCR indicates higher efficiency. This efficiency matters because using less feed in an aquaculture operation, without implications on the volume of seafood produced, helps to keep costs of inputs lower and operations more sustainable.

The reason that improving feed efficiency improves sustainability is twofold. First, efficient feeding reduces waste and nutrient runoff into the water column. Additionally, production of feed and feed ingredients is responsible for a high percentage of greenhouse gas emissions in the aquaculture sector (85%[8] and 50%[9], respectively, for salmon and shrimp production). As such, reducing the amount of feed utilized helps to avoid some of these emissions.

Moreover, FCR is an indicator of animal health and welfare. Animals that are experiencing stressors such as disease, sub-optimal water quality conditions, or predation will often eat less, resulting in slower growth rates, lower survival rates, wasted feed, and lower biomass at harvest.

Currently, seven companies in the BRF portfolio are producing technologies that improve FCR.

1. **CageEye**: produces devices that use echo-sound to monitor fish behavior and appetite in real time. When fish become satiated, the system signals to stop feeding; thus, optimizing the use of feed.
2. **ChucaoTec**: produces nanobubble injectors, which are used to add dissolved oxygen to water. More oxygenated water improves metabolism in fish because they are healthier and less stressed, allowing them to better utilize nutrients from feed and requiring less feed overall.
3. **Peptobiotics**: produces specialized proteins (recombinant antimicrobial peptides) that combat bacteria. These proteins replace conventional antibiotics and thus enhance gut health in fish, promoting better nutrient absorption.
4. **Remora**: produces autonomous robots that clean and inspect aquaculture cages. Cleaner cages result in better oxygen flow and reduce stress in fish, which improves survival rates.
5. **Planktonic**: specializes in cryopreservation technology to freeze marine zooplankton at ultra-low temperatures, allowing them to be shipped and "brought back to life" instantly as fresh fish food. By providing fish with their natural, nutrient-rich diet, they can grow faster and healthier with much less waste.
6. **Biosort**: produces 3D camera sensors to recognize unique head-spot patterns on salmon, creating individual health summaries that track growth and signs of illness. This information enables the producer to pursue targeted treatments rather than mass treatments, which reduces overall stress in the population. Lower parasite loads and lower stress channel the fish energy towards growth rather than immune response and thus improve FCR.
7. **Aviwell**: produces digital animal models to find "good" natural bacteria that already live inside healthy fish. By giving these specific bacteria to young fish, they can improve the animal's digestion and metabolism for the rest of its life. This improves fish growth and health, thus reducing the need for feed.

We are excited about the future and eager to share BRF's ongoing impact and achievements. Stay tuned for more updates as we grow the portfolio and continue to drive positive change across the aquaculture sector. Thank you for your continued support and interest in the BRF.

8 Greenhouse gas emissions of Norwegian seafoods: From comprehensive to simplified assessment

9 Better Shrimp Farming Could Take a Bite Out of Carbon Emissions

FUND MANAGER

HATCH
Blue Revolution Fund

CONSERVATION MANAGER

The Nature Conservancy

NOTICE TO RECIPIENTS

Neither TNC nor any of its affiliates is registered, or intends to register, as an investment adviser under the U.S. Investment Advisers Act of 1940, as amended, or the laws of any other country or jurisdiction. None of the advice or services provided by TNC shall constitute investment advice and any advice or services provided by TNC will be solely related to the conservation activities of BRF. This material has been prepared solely for informational purposes and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. Any such offer or solicitation may only be made by means of delivery of an approved offering memorandum and only in those jurisdictions where permitted by law. The recipient should not construe the contents of these materials as legal, tax, accounting, or investment advice or as a recommendation. All and any information, opinions, and amounts indicated are subject to change without prior warning. Any estimates or projections as to events that may occur in the future (including projections of revenue, expense, net income, and stock performance) are based upon the best judgment of TNC and from the information provided by Hatch Blue and other publicly available information as of the date of this material. Certain information contained in this material constitutes forward looking statements, which can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "target," "project," "estimate," "intend," "continue," or "believe," or the negatives thereof or other variations thereon or comparable terminology.