

Case #3. Aquaculture Confronts Ethical Challenges

In May 2021, **People for the Ethical Treatment of Animals (PETA)** and **Kip Andersen**, producer of the documentary “Seaspiracy” which condemns offshore aquaculture, signed a letter calling on U.S. President Joe Biden to reverse Executive Order 13921 claiming it “cause(d) substantial suffering to the farmed fish.” The previous May, then US President Donald Trump had signed Executive Order 13921 on “Promoting American Seafood Competitiveness and Economic Growth” which authorized aquaculture farming off the US coast.

PETA said they delivered the letter on behalf of PETA’s 6.5+ million members, “and millions of viewers disturbed by the revelations in the documentary Seaspiracy.”

Since its premier on Netflix in March 2021, the 90-minute Seaspiracy has earned steady viewership – and criticism from seafood industry stakeholders and scientists. The **Marine Stewardship Council**, **Oceana**, the **National Fisheries Institute (NFI)**, and other organizations supportive of the fishing industry have panned the film as misleading, with **NFI** likening it to a “slickly produced propaganda [piece].”

Despite some problems in the past, proponents of the industry claim aquaculture has the future potential to deliver affordable, healthy protein and could provide a way of diverting pressure from wild fish stocks.

Aquaculture’s Checkered Environmental History

The website of the industry’s **Global Aquaculture Alliance (GAA)** acknowledges that in the past, when the aquaculture industry was just getting its footing, certain factors inhibited the industry from producing fish sustainably.

‘The intention of fish farming was never to impact the environment, but to increase food security. However, environmental problems did arise. There was no shortage of negative press, and these stories have stayed with the public. Common criticisms were related to nutrient and effluent build-ups, the impact of fish farms on local wild fisheries with respect to disease and escaping, and environmental degradation due to the site’s location...Farmers’ usage of antibiotics to prevent disease created concern about the effect of the drugs on the ecosystem around the cages, including wild fish. Many also worried that the escape of nonnative fish would cause wild fish to compete for food, potentially displacing the native fish.

These were all valid criticisms given that the industry was just beginning to learn how to cope with issues as they came up, as any new industry does.”

Industry citation of its positive environmental impacts

Farmed seafood is incredibly resource efficient, especially when compared with other animal proteins (beef, pork, chicken). The feed conversion ratio, which is the measurement of how much feed it takes to produce the protein, is 1.1. This means that essentially one pound of feed produces one pound of the protein. Beef, pork and chicken’s feed conversion ratios vary between

2.2-10. As a result, seafood's protein retention, as well as energy retention are remarkably high as well.

As farmed fish are closely monitored in comparison to wild fish, farmers have more control over variables. This can positively impact the environment and the fish. Farmed fish are generally free of environmental contaminants like mercury and heavy metals, as they exclusively eat human-processed feed. Fish feed's toxin levels are regulated.”

Global Aquaculture Alliance Guiding Principles

At its inception in 1997, the **Global Aquaculture Alliance** established a set of **Guiding Principles** in pursuit of its mission is to promote responsible aquaculture practices through education, advocacy and demonstration. The GAA website reiterates these principles and asserts they “remain relevant and have improved aquaculture practices throughout the farming, processing and distribution of aquaculture products, (and) ...aim to expand the availability of seafood from Best Aquaculture Practices-certified facilities that address these principles.

1. Shall coordinate and collaborate with national, regional and local governments in the development and implementation of policies, regulations and procedures necessary and practicable to achieve environmental, economic and social sustainability of aquaculture operations.
2. Shall utilize only those sites for aquaculture facilities whose characteristics are compatible with long-term sustainable operation with acceptable ecological effects, particularly avoiding unnecessary destruction of mangroves and other environmentally significant flora and fauna.
3. Shall design and operate aquaculture facilities in a manner that conserves water resources, including underground sources of fresh water.
4. Shall design and operate aquaculture facilities in a manner that minimizes the effects of effluents on surface and ground water quality and sustains ecological diversity.
5. Shall strive for continuing improvements in feed use and shall use therapeutic agents judiciously in accordance with appropriate regulations and only when needed based on common sense and best scientific judgment.
6. Shall take all reasonable measures necessary to avoid disease outbreaks among culture species, between local farm sites and across geographic areas.
7. Shall take all reasonable steps to ascertain that permissible introductions of exotic species are done in a responsible and acceptable manner and in accordance with appropriate regulations.
8. Shall cooperate with others in the industry in research and technological and educational activities intended to improve the environmental compatibility of aquaculture.
9. Shall strive to benefit local economies and community life through diversification of the local economy, promotion of employment, contributions to the tax base and infrastructure, and respect for artisanal fisheries, forestry and agriculture.

<https://www.aquaculturealliance.org/blog/what-is-the-environmental-impact-of-aquaculture/>

The FMFO Issue

Recently, the feed used in aquaculture has come under attack. Almost one-fifth of the world's total catch of wild fish is processed into fishmeal and fish oil, known by its acronym, "FMFO" that is fed to farmed fish.

A June 2021 report published by the **Changing Markets Foundation** in partnership with **Greenpeace Africa** entitled, "Feeding a Monster: How European aquaculture and animal industries are stealing food from West African communities," asserts that each year over half a million tons of wild-caught fish are taken out of the oceans around West Africa and ground down into fishmeal and fish oil (FMFO) to feed farmed fish and animals in Europe and Asia. The fish could instead provide essential protein to over 33 million people in the region each year.

In November 2020, Changing Markets published a similar report on the FMFO industry in Peru entitled, "**What Lies Beneath: Uncovering the truth about Peru's colossal fishmeal and fish oil industry.**" The report details how The Peruvian FMFO industry is the largest producer in the world, accounting for one-third of global production and exporting approximately 1 million tons of FMFO every year. It notes that Peruvian companies are selling FMFO to European aquafeed giants, which sell salmon to major retailers including Aldi, REWE, Marks & Spencer and Sainsbury's. The report calls for a rapid phase-out the use of wild-caught fish to feed farmed fish and other farmed animals.

In the same month, **Changing Markets** published, "The Hidden Cost of Farmed Salmon," indicting among others UK supermarket Sainsbury's. The report asserts that Sainsbury's describes itself as 'leading the way in sustainable fish'. With its farmed salmon packaging states that "the salmon are fed a bespoke diet designed to protect our natural resources from overfishing." The report states that in reality the retailer's farmed salmon, one of its biggest seafood sellers, is fed a diet of FMFO. The report also criticizes the performance of Norwegian aquaculture giant Mowi, Sainsbury's main salmon supplier on a variety of issues and calls on Sainsbury's and Mowi to commit to eliminating the use of wild-caught fish in its feed.

EU and Aquaculture Regulation

In 2013, the **European Commission** adopted non-binding strategic guidelines for the sustainable development of EU aquaculture, which served as the basis for the development by EU countries of specific national strategic plans for aquaculture. The **European Maritime and Fisheries Fund** has historically provided specific funding to support the sustainable development of aquaculture in the EU.

The Commission has adopted new strategic guidelines in 2021 and EU countries have reviewed their national strategies in light of the new guidelines. The now-named **European Maritime, Fisheries and Aquaculture Fund** (2021-2027), reporting to the **European Commission**, will continue to make available funding for EU aquaculture.

Objectives of EU Aquaculture Regulation

The **European Commission** wants to help develop the EU aquaculture sector that ensures the supply of nutritious, healthy and tasty food with a low environmental and climate footprint, creates economic opportunities and jobs, and becomes a global reference for sustainability and quality. Its policy aims specifically to

- building resilience and competitiveness
- ensuring the participation of the sector in the green transition
- ensuring social acceptance and consumer information on EU aquaculture activities and products
- increasing knowledge and innovation in the EU aquaculture sector

EU Actions

Through the “**strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021-2030**,” the **Commission** provides a common vision for EU countries, the aquaculture sector and other stakeholders to develop the sector in a way that contributes directly to the “European Green Deal” and the “Farm to Fork Strategy.” EU countries have reviewed their national strategic plans to promote aquaculture to take into consideration that vision.

The **European Maritime, Fisheries and Aquaculture Fund (EMFAF)** will continue to make available specific financial support available to ensure the best possible conditions for the EU aquaculture sector to develop sustainably. Each EU country decides how it wants to spend that money, provided that this is consistent with its national strategic plan for the sector.

The EU has also supported **research and innovation** on key elements for the sustainable development of European aquaculture. From interactions with the environment, health and nutrition of farmed fish, to reproduction and breeding. Research and innovation on sustainable aquaculture is an important priority under **Horizon Europe**, the EU framework programme for research and innovation.

EU Aquaculture Rule Implementation

Aquaculture is a complex activity that involves many elements, from the use of space and water, taking care of the health and welfare of animals farmed, or ensuring the safety of products used in the farming process (such as feed or veterinary treatments) for the environment and human health. There are more than 300 EU regulations governing aquaculture.

The main responsibility of the application of this legislation and the management of aquaculture activities lies with public authorities in the different EU countries. To allow EU countries to support their producers while respecting EU competition rules and other policies, specific state aid rules apply to the fishing and aquaculture sectors.

Collaboration with EU countries and stakeholders

The **Aquaculture Advisory Council (AAC)** consists of sector representatives and stakeholders, all of whom have an interest in promoting fisheries. Aquaculture critics within the environmental

NGO community are not members.) The AAC provides EU countries and EU institutions with recommendations on sustainable aquaculture. However, it has no statutory authority.

CASE QUESTIONS

1. (3) The 9 GAA Guiding Principles are equivalent to an ethical code consisting solely of “general precepts.” Given the critique of the industry, identify a “specific practice” that might facilitate implementation of each of the 9 Principles in the form, “Our company will....” (Maximum length for each “specific practice: 20 words)
2. (1) Construct a clear statement about promulgation and enforcement of your proposed specific practices. (maximum length 60 words)

from Module 3:

IV. Ethical Codes

Many companies use ethical codes to guide the behavior of employees. Similarly, many social media websites have *de facto* ethical codes to guide the behavior of users of their websites.

There are three steps in a successful ethical code:

1. Code Design. Ethical codes consist of a combination of general precepts and specific practices. The general precepts permit broad application of a particular prohibition in a code, while specific practices define specific activities or practices that are NOT acceptable. (In the past, students were not careful in considering what the terms “general” and “specific” mean. Please do not make this mistake.)
2. Code Promulgation, which means making sure the code is widely understood by company employees (and, if an association, company members) and they “buy into,” i.e., accept and embrace, the code’s objectives and elements.
3. Code Enforcement, which includes
 - a. Detection, monitoring employees or member companies to determine if an element of the code has been violated, and
 - b. Consequences for violation of the code.