

EXECUTIVE SUMMARY

OCEAN-BASED FISH FARMING CAN NEVER BE ORGANIC



ORGANIC AQUACULTURE¹ has the potential to minimize the environmental and human health impacts associated with aquaculture production. It also has the potential to supply a sustainably produced source of protein for human consumption. Yet, organic systems will require more than simply replicating existing ocean-based aquaculture systems with some minor tweaks. That is because most existing conventional facilities are more akin to intensive, industrial fish factories than organic farms. Therefore, to be able to grow, label, and sell fish as “certified organic” requires the development of a holistic approach of organic systems management—from facility placement to fish harvesting.

Like Water and Oil: Ocean-Based Fish Farming and Organic Don't Mix explains why not every type of aquaculture system or fish species can be certified organic, drawing from the scientific literature and experiences and mishaps of the

conventional aquaculture industry. It discusses the large number of unpreventable fish escapes documented around the world and explains how weak reporting requirements allow underreporting of the vast number and volume of escapes that occur. The Report summarizes the array of synthetic, toxic substances and radionuclides that have been regularly detected in the marine environment and how the exposure and accumulation of these substances in farmed fish cannot be avoided. Negative impacts of open-ocean fish farms on ocean ecology are examined in terms of the spread of pathogens and pollutants, the alteration of marine food webs and the behavior of wild species—sealing the case that open ocean facilities can never be organic.

Currently, the U.S. Department of Agriculture (USDA) is poised to finalize organic aquaculture production regulations, based upon recommendations from its National Organic Standards Board (NOSB) of advisors. Despite all of the well-documented problems associated with ocean-based fish farming, as discussed at length in this report, the NOSB has recommended allowing ocean-based systems to be certified organic. They have also recommended allowing wild caught fish and their by-products to be used in feed, which is not 100% certified organic. This flies in the face of the Organic Foods Production Act (OFPA)'s² foundational requirement that all animals are fed a 100% organic diet.

For more than a decade, Center for Food Safety and a wide range of organizations and individuals from the organic community have repeatedly argued that ocean-based aquaculture can never meet the rigorous standards required of land-based organic farms. The intent of *Like Water and Oil* is to explain in detail the many compelling reasons why that is so as well as to recommend operational criteria to guide the evaluation and regulation of potential organic, closed-looped, recirculating land-based aquaculture systems. It is our hope that USDA will seriously take into consideration this comprehensive analysis before issuing final regulations on organic aquaculture that could put the entire U.S. organic industry in jeopardy by weakening the integrity of the USDA organic label.

MAJOR REPORT FINDINGS

Open-ocean fish farms can never be organic.

Inputs and outputs to the system cannot be monitored or controlled and neither can a farmed fish's exposure to toxic synthetic chemicals, which are prohibited under OFPA and present in the marine environment.

Farming migratory fish can never be organic.

This statement holds true regardless of the type of system in which they are reared. That is because their confinement in fish farms would curtail their

We believe that allowing these practices undermines the integrity of all organic farming systems and the organic label, and they do not meet the requirements of OFPA [“Organic Aquaculture Position Statement,” with 53 endorsements, Appendix A].

biological need to swim far distances, creating stress. Some migratory species are also anadromous, such as salmon, migrating between freshwater and the ocean during various life stages, a behavior not possible while in containment.

Farmed fish fed wild fish, meal or oil can never be organic.

That is because OFPA requires that all certified organic species are fed an organic diet.³ Feeding farmed fish wild caught fish and related by-products—fish meal and fish oil—would increase pressure on already over-exploited and recovering fisheries that form the basis of the marine food web. It would also decrease the food supply of a wide range of native, aquatic species, including seabirds and sea mammals, contravening the USDA organic biological diversity conservation requirements.

These findings are supported by 53 endorsers, which are listed in the Organic Aquaculture Position Statement in Appendix A.

All organic production systems, whether marine or terrestrial, must adhere to the principles of organic. Certified organic fish farms must support biodiversity and biological cycles within the system, prohibit and eliminate dangerous inputs and outputs, and provide nutritious, naturally-suitable, organic feed preferably from within the system itself. Organic aquaculture systems of all sizes must facilitate the natural behaviors of all farmed species, minimize negative impacts to the surrounding environment and indigenous species, and prevent escapes into neighboring water bodies. As *Like Water and Oil* demonstrates, ocean-based aquaculture facilities cannot meet these minimum requirements, and therefore can never be considered organic.

While this Report details how and why open ocean aquaculture practices contravene the spirit, intent, and letter of OFPA, it does not completely close the door on prospects of creating a land-based organic system of aquaculture. The Report concludes by recommending essential principles that must guide the creation and operation of any organic aquaculture system, leaving open the question of whether a land-based, closed-loop, recirculating *organic* system could be possible. But, given the departure from organic soil-based systems around which OFPA was created, Center for Food Safety strongly recommends mandating substantial field-testing to ensure the operational criteria for different types of land-based farms can meet the high standards demanded by OFPA.