# How Farmed Fish Degrades Our Health and the Environment – Better Options Included

More than 1 billion people across the world rely on fish as their main source of protein. Consequently, the world's oceans are in trouble with marine life plummeting. More than 80 percent of the world's fisheries are either considered fully exploited or overfished and on the brink of collapse. People who are dependent on the sea for income and food are left increasingly vulnerable. Our oceans are radically depleted. A decade-long international survey of ocean life completed in 2010 estimated that 90% of the ocean's big fish have disappeared.

Aquaculture seems to be a sustainable solution to overfishing, but the reality is that fish farms are causing huge problems. As typical with big business, profits are more important than ecological sustainability or our health.

As the world began to attempt to limit overfishing the aquaculture industry boomed. Between 1980 and 2015, the total amount of fish production from aquaculture increased more than 16 times from 4.7mn tonnes to 76.6mn tonnes. If you eat seafood, unless you catch it yourself (or ask the right questions), it probably comes from a fish farm. More than half of the fish we consume is farmed. The aquaculture industry is growing faster than any other animal agriculture segment, overtaking beef production in 2012. A report by the Earth Policy Institute in Washington DC reported that farmed fish production reached 66 million tonnes in 2012, while beef production was at 63 million tonnes.

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# Why Farmed Fish Are So Toxic To the To Us and the Environment

One study showed that aquaculture in Sweden "is not only ecologically but also economically unsustainable." Another report looked at farmed fish in Chinese lakes and concluded that it is an "economically irrational choice from the perspective of the whole society, with an unequal tradeoff between environmental costs and economic benefits." Aquaculture harms the environment, which eventually costs a lot of money. In the U.S., fish farming is responsible for roughly $700 million a year in environmental costs. Fish farming operations typically generate more costs than profit.

## Abhorrent Conditions

Research has shown that fish feel pain and stress. Large-scale fish farm operations have fish living in extremely crowded conditions, often leaving each fish less space than the size of an average bathtub. Living in this close proximity increases infection and disease, which leads to antibiotics which further pollutes surrounding waters.

## Farmed Fish Eat Their Own Shit

The feces concentration is often so great as to cause the fish to ingest their own poop, increasing the likelihood of disease. The fish poop also promotes algal growth and reduces the oxygen content in the water, which makes it harder to support life. Fish waste and uneaten feed litter the sea floor beneath fish farms contaminates the area and generates bacteria that consume oxygen vital to shellfish and other bottom-dwelling sea creatures. Reportedly, the Israeli government closed two fish farms in the Red Sea after discovering the farms were causing algal growth that was

harming coral reefs.

## A Cesspool of Disease

Pathogens from farmed fish pools can spread rapidly to contaminate any wild fish swimming past. Sea lice, a type of crustacean that finds captive fish on farms to be an easy target, have become huge problems for the industry. And the increased prevalence of these crustaceans due to fish farming is being blamed for reduced numbers of wild pink salmon, as well as the species that eat them, including bears, eagles, orcas and others.

Lethal viruses that are known to spread from fish farms are being detected in wild populations. Salmon leukemia virus is said to act like HIV, in that it depletes the immune system leaving animals susceptible to other infection. Infectious Salmon Anemia Virus (ISA) is also known as salmon influenza. It’s highly lethal Piscine reovirus, which degrades salmon’s heart health, causing heart attacks and preventing salmon from swimming upriver.

## Toxic Antibiotics, Pesticides & Other Chemicals

Concentrated levels of antibiotics, pesticides and other chemicals used to fight infection are found in farmed fish. The effects these practices have on our environment are only beginning to be understood. One study found that a drug often used to kill sea lice will also kill other marine invertebrates, and contaminates waters at least up to half a mile away.

## Farmed Fish Food

Many farmed fish are being fed genetically modified corn and soy. Some report that in China farmed fish are often feed animal feces. One report from the USDA from 2009 stated,

> *[It] is common practice to let livestock and poultry roam freely in fields and to spread livestock and poultry waste on fields or use it as fish feed.”*

## Carnivorous Fish Farms Eat Too Much Fish

Many fish require a fish-based diet, and can require much more food than they produce. Now anchovies and herring and other small prey are being dangerously overfished to the brink of extinction in order to meet the growing demands of aquaculture. Tuna and salmon consume up to five pounds of fish for each pound of body weight.

> *We have caught all the big fish and now we are going after their food,”- Oceana*

It’s been shown that every pound of farmed salmon needs five pounds of smaller fish to feed it.

Oceana blames aquaculture for declines in whales, dolphins, seals, sea lions, penguins, albatross and many other species.

> *Rather than relieving pressure on wild fish, growing these large carnivores [salmon and tuna on fish farms] requires a steady supply of prey that are caught and ground into oil and meal. As the industry grows, it is straining the existing supply of prey fish, putting additional pressure on populations that cannot supply the demand.”*

## Toxic, Diseased, & GMO Farmed Fish Escape

Many fish farms use netpens to confine fish in open waters. These systems are susceptible to being ripped from predators and due to storms. In the North Atlantic region alone it's said that two million farmed salmon escape their farms each year. The result is that at least 20% of wild salmon caught in the North Atlantic are actually of farmed-fish origin. Farmed fish that escape will breed with wild fish and compromise the gene pool. Embryonic hybrid salmon, for example, are far less viable than wild salmon, and the resulting adult hybrid salmon routinely die much earlier than true wild salmon. This also harms predator populations that rely on fish like bears and orcas.

## More Fat, but Less Omega 3s and Other Nutrients

Farmed salmon, for example, is much fattier than wild salmon, but it contains FAR LESS healthful omega-3 fats and less protein. The omega-3 levels in farmed salmon keep dropping with each new study.The International Fishmeal and Fish Oil Organization (IFFO) says that today's farmed fillet contains as little as half of the omega-3s the fish had less than a decade ago. Salmon farmers in New Zealand were caught overstating the omega-3 fat levels of their fish.

Farmed salmon that is high in omega 3s get their higher levels from being fed fish oil. Like with the prey fish, the demand for fish oil is outstripping supply. This practice is becoming too expensive, and many fish are being fed cheap GMO oils to fatten them up.

Farm-raised tilapia is one of the most highly consumed fish in America. Studies show that tilapia has very low levels of beneficial omega-3 fatty acids and very high levels of inflammatory omega-6 fatty acids that may cause an

“exaggerated inflammatory response.”

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## More PCBs

A report published in 2003 by the Environmental Working Group found that seven out of ten farmed salmon purchased at grocery stores in Washington DC, San Francisco, and Portland, Oregon contained PCBs at levels that raise health concerns. It’s a safe bet that these statistics have only grown worse as plastic continues to pollute our planet.

It’s said that farmed salmon are likely the most PCB-contaminated protein source in the U.S. food supply chain.

> *Farmed salmon are fed contaminated fishmeal. Farmed salmon are fed from a global supply of fishmeal and fish oil manufactured from small open sea fish, which studies show are the source of polychlorinated biphenyls, or PCBs, in most farmed salmon. In three independent studies scientists tested 37 fishmeal samples from six countries, and found PCB contamination in nearly every sample.” – Environmental Working Group*

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## China…

Chinese farmed fish accounts for about 60 percent of farmed marine products worldwide. China is the leading provider of farmed fish to the US. If you’re buying tilapia, it’s probably from China.

Excerpt from *The Disgusting Truth About Fish And Shrimp From Asian Farms*:

- Tilapia in China's fish farms, are fed pig and goose manure – even though it contains salmonella and makes the tilapia "more susceptible to disease."
- In Vietnam, farmed shrimp bound for the US market are kept fresh with heaps of ice made from tap water that teems with pathogenic bacteria.
- Bloomberg also notes that at the same company "there's trash on the floor, and flies crawl over baskets of processed shrimp stacked in an unchilled room."
- Like US meat farmers, Asia's shrimp farmers rely heavily on antibiotics, many of which are banned for use in the United States.
- In May, ABC News bought 30 samples of imported farmed shrimp from across the country and had them tested for antibiotic traces. The result: Three of the samples contained detectable levels of these dangerous antibiotics.
- According to a recent study by the Centers for Disease Control and Prevention, a quarter of the food-borne illness outbreaks caused by imported food from 2005 to 2010 involved seafood – more than any other food commodity.

# Fish To Avoid and the Better Seafood Choices

**Bivalves,** such as oysters and mussels, can be farmed in an environmentally conscious manner because they are "filter feeders,"; they actually make the water in their ecosystem cleaner, and they are much easier to contain due to their lack of mobility. But, this means that the environment bivalves grow in should already be fairly clean, or else the seafood can transfer pollutants and other toxins to the consumer.

**Alaskan salmon** is not permitted to be farmed. **Sockeye salmon** cannot be farmed. **Atlantic salmon** comes from fish farms.

Farmed salmon is rife with chemical contaminants ranging from pesticides and antibiotics to PCBs.

> *In restaurants, mislabeled salmon will typically be described as 'wild' but not 'wild Alaskan.' This is because authentic 'wild Alaskan' is easier to trace. The term 'wild' is more nebulous and therefore more often misused. In many ways it is very similar to the highly abused 'natural' designation. — Dr. Mercola*

**Atlantic Flatfish,** including sole, flounder and halibut, are high in contaminants and they have a long history of being radically overfished. **Pacific halibut** is a safer and more environmentally friendlier option.

Almost 90 percent of **catfish** comes from Vietnam – a country with loose regulations on the use of dangerous antibiotics and other chemicals. Like catfish, **Pollock** is a mild, white fish with a delicate flavor that's naturally low in mercury. Look for **pollock from the US, Canada,** and **Norway** which provide the most eco-friendly harvesting.

**Eel**, also called **unagi**, is primarily farmed in China. A powerful carcinogen called nitrofuran, and many other drugs and pesticides, are used to control disease in eel farms. Eel also has plenty of mercury and cancer-causing PCBs. **Squid** is an eco-friendly alternative to eel.

**Imported & Farm-Raised Shrimp** is one of the dirtiest seafood sold. Chemical residues, antibiotics, and an assortment of other contaminants have been found in farmed shrimp. While avoiding imported, farmed shrimp can greatly reduce your exposure to contaminants, it's important to note that 70 percent of **domestic shrimp** comes from the Gulf of Mexico. With the recent oil spill, this raises concern for the health of these shrimp stocks. Your best bet is MSC-certified wild-caught **Pacific shrimp from Oregon**.

**Atlantic bluefin tuna** is said to have the highest levels of mercury and they have plummeted to near-extinction levels. The eco-friendly tuna varieties (like **albacore or yellowfin**) areproblematicc as well. Oceana collected 1,215 samples from seafood vendors from 2010 to 2012reported that 59% of fish labeled tuna is not just mislabeled but it is almost entirely compromised of escolar, which is not likely a fish we want to be eating:

> *To be frankly and bluntly specific – and I'm sorry for this – consumption of escolar causes explosive, oily, orange diarrhea. People have reported that the discharges are often difficult to control and accidents can happen while passing gas." – The Kitchn*

A good alternative to tuna is the **Atlantic mackerel** or try **sardines**.  They both are high in omega-3s, and they don't have the high levels of mercury and other contaminants that tuna accumulates.

**Tilapia from overseas fish farms** have a bad reputation due to the aforementioned practices, but **tilapia farmed in the U.S. and Canada** typically use closed recirculating tank systems that alleviate many of the problems like water pollution and fish escapes. In Ecuador, tilapia are typically farmed in low-density freshwater ponds, which eliminate overcrowding and reduces disease. Tilapia are fed a mostly grain-based diet, so they don't deplete prey-fish resources.

# Farmed Seafood Documentaries

**Sources:**


- *Six Toxic Fish (Plus Safe and Delicious Alternatives)* – US Wellness Meats

- *Farmed fish overtakes farmed beef for first time* – New Scientist
- *9 Things Everyone Should Know About Farmed Fish* – Mind Body Green
- *The Disgusting Truth About Fish And Shrimp From Asian Farms* – Business Insider
- *Wake Forest Researchers Say Popular Fish Contains Potentially Dangerous Fatty Acid Combination* – Wake Forest Baptist Medical Center
- *Aquaculture: 8 Fishy Facts* – China Water Risk
- *Six Toxic Fish (Plus Safe and Delicious Alternatives)* – Grassland Beef
- *The truth about tilapia* – Fox News
- *Is Farmed Salmon Losing its Omega-3 Edge?* – CivilEats
- *Wild Atlantic and Farmed Salmon* – Slowfood
- *New Zealand farmed salmon not as green as claimed, says consumer group* – Food Navigator
- *Salomon Farming Problems* – Farmed and Dangerous
- *Farmed and Dangerous: Sea Lice* – Farmed and Dangerous
- *Farmed and Dangerous: SLICE* – Farmed and Dangerous
- *Farmed and Dangerous: Escapes and Alien Species* – Farmed and Dangerous