De-Coding Seafood Eco-Labels:

Why We Need Public Standards

food&waterwatch

About Food & Water Watch

Food & Water Watch works to ensure the food, water and fish we consume is safe, accessible and sustainable. So we can all enjoy and trust in what we eat and drink, we help people take charge of where their food comes from, keep clean, affordable, public tap water flowing freely to our homes, protect the environmental quality of oceans, force government to do its job protecting citizens, and educate about the importance of keeping shared resources under public control.

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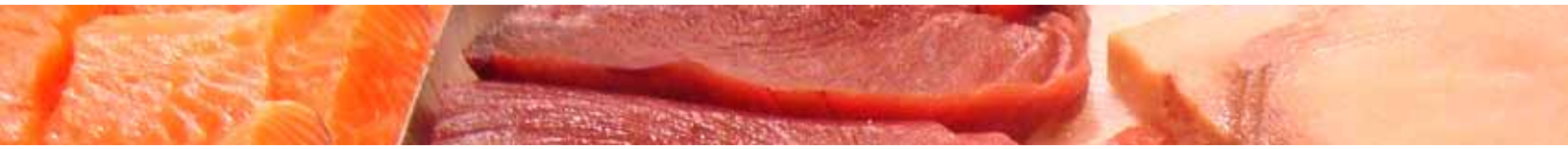

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Executive Summary

Choosing the best fish to eat can be complicated. People browsing seafood counters or restaurant menus may wonder whether certain fish are both safe and sustainable. In many cases, the more a person knows, the more questions arise: Is this wild or farmed? Local or imported? Produced in an environmentally responsible way? High in mercury? Tainted with antibiotics and chemicals?

In light of these questions, there is a demand for straightforward guidance on seafood. To address the sustainability questions surrounding fish, a number of certification programs have developed sets of standards and labels to evaluate and then market "environmentally friendly" or "sustainably produced" fish.

Meanwhile, many seafood restaurants and retailers have begun sourcing their seafood predominantly or exclusively from fisheries or companies that have been "certified" by eco-labels in an effort to promote their environmental awareness about seafood sustainability to consumers. California's state government has committed to implement a seafood sustainability program that is based on the standards from some of these eco-labels.

But what do these labels really mean? Food & Water Watch examined various seafood certification programs and unfortunately, these labels do not always represent what consumers expect.

Our research reveals a variety of flaws and inadequacies associated with the eco-labels analyzed and suggests that private labels may not be the most appropriate means to convey neutral, credible information about seafood. While the intent to raise awareness about sustainability among seafood suppliers and fish farms is admirable, it is questionable whether these labels are actually increasing sustainability in the marketplace.

This report proposes that in order to provide consumers with much-needed, unbiased and well-regulated information, the federal government should introduce and oversee standards for eco-labeled seafood. Until that time, consumers can use our guidelines and recommendations on safer seafood choices, as well as tips on other seafood-related concerns at the end of this report.

Findings

- The eco-label certification programs reviewed in this report demonstrate inadequacies with regard to some or all of the following: environmental standards, social responsibility and community relations, labor regulations, international law, and/or transparency.
- Eco-labeling programs may cause increased public acceptance of products from controversial farming operations, such as coastal shrimp ponds and open-water aquaculture.
- Eco-labeling programs fail to promote local seafood options or account for the miles that imported seafood travels.
- Existing eco-labels have the potential to override the authority of governments, particularly in developing countries.
- Each of the examined eco-labels that certify wild fisheries fails to meet Food and Agriculture Organization criteria for eco-labeling and certification programs for wild fisheries.
- Financial constraints have affected the ability of some otherwise eligible fisheries to attain certification.
- For some programs, there is a conflict between the intent to promote change within a certain fishery and the product labeling program, which can place a seal of approval on a product from a certified fishery before it has made conditional improvements in ecological performance to actually meet the standards for the label.
- Eco-labels should not be permitted for forage fish. These types of fish are processed into fishmeal and fish oil for use in various products, including animal feed. Depleting forage fish stocks can damage marine food webs and negatively impact food security in developing countries.

Introduction and Background: What's an Eco-Label?

The concept behind eco-labels is to help consumers more easily identify products that are "greener," more "environmentally friendly" or more "sustainable." Eco-labels can be found on a wide array of goods, from cleaning supplies to paper products to seafood. In addition to providing a means of identification for consumers, labeling can also be used as an incentive for industries to clean up their act; if they "go green," they earn the ability to market more easily to the growing body of consumers seeking eco-friendly options.

An official definition, provided here by the International Organization for Standardization, defines eco-labeling as "a voluntary, multiple-criteria based, third-party program that awards a license that authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations."[i]

In 2009, the environmental marketing firm TerraChoice did a comprehensive survey of more than 2,000 products sold in large North American retail stores. The company found that more than 98 percent of eco-labeled products were misleadingly labeled in some way.[ii] They attributed the misleading labeling to a variety of causes, ranging from lack of proof about the product's environmental benefits or vagueness in use of terms like "natural" or "green," to fictional eco-labeling images (sometimes even designed by the company itself). On occasion, products even claimed to be certified by a particular authority when they were not. [iii]

In the case of fisheries and seafood, eco-labels have emerged in response to the range of controversial issues related to the production and consumption of fish. Poor fisheries management has caused the depletion of many wild fish populations, and imported seafood from countries with lower health, safety and environmental standards can be tainted with dangerous chemicals and antibiotics.[iv] More than half of our seafood now comes from aquaculture — also known as fish farming — and many methods of this type of farming are associated with serious environmental degradation and consumer health risks.[v]

The absence of a U.S. Department of Agriculture (USDA) "organic" standard or any other U.S. government label for seafood has left a large gap in certified seafood, which private companies and organizations are clamoring to fill.

Seafood Eco-Labels

Two primary complications exist for seafood certification. First, as with other products, the definition of ecological sustainability and creation of standards is highly controversial and difficult to come to consensus on. Second, some of these certification programs have additional interests beyond providing consumer guidance. Whether it's an interest in establishing a relationship with a fishery in order to work toward improvement, or getting more eco-certified product on the market, these other interests compete with label neutrality.

Standards, motivations and approaches all differ between various labels. Following is a brief breakdown on those examined in this report.

- The *Marine Stewardship Council* (MSC) was initially created by the World Wildlife Fund for Nature (WWF) and Unilever — once one of the world's largest seafood buyers.[vi] MSC became independent in 1999.[vii] It exclusively certifies wild fisheries[viii] and has traditionally seen certification as a way to form a long-term working relationship with a particular fishery.[ix] MSC states that it bases standards around maintaining sustainable fish stocks, minimizing ecological impact and recognizing effective management.[x]

- *Global Aquaculture Alliance* (GAA) was founded in 1997 by a wide range of international aquaculture companies, chain seafood restaurants including Darden Restaurants (parent company to Red Lobster and Olive Garden, among others), wholesalers like U.S. Foodservice, and agribusiness companies, including big names like Monsanto and Cargill. It is now a powerful industry consortium with hundreds of corporate members.[xi] One of GAA's primary programs is the certification label known as *Best Aquaculture Practices* (BAPs), which was introduced in 2003. GAA uses the *Aquaculture Certification Council* (ACC) as its exclusive certifying body. ACC only certifies farmed fish and produces certification criteria species-by-species.[xii] Among other things, its standards consider environmental and social responsibility, animal welfare, and food safety.[xii]

- *Friend of the Sea* (FOS) was established in 2006 in Italy by the creator of the dolphin-safe tuna label,[xiv] and has quickly gained a sizeable portion of market share in central and southern Europe, although its presence is less visible to consumers in the United States. FOS certifies both farmed and wild fish, and boasts a wide range of certifications, including for fishmeal and oil from forage fisheries, which are an essential part of the marine food chain.[xv]

- *Global Trust Certifications, Ltd*. was established in 2007 to certify fish farms. Their standards are not easily accessible to the public and public use is controlled, creating a certain measure of doubt as to whether the criteria are rigorous enough to withstand independent review.[xvi] According to the company, the label allows producers to demonstrate their "commitment to environmental sustainable development, low impact farming and conservation when producing and processing" seafood.[xvii]

- The *International Fishmeal and Fish Oil Organization* certifies forage fish, or reduction fisheries, through the Global Standards for Responsible Supply, with a focus on sustainability and food safety.[xviii] Reduction fisheries supply the raw materials for fishmeal and oil. Fishmeal and oil are used primarily as ingredients for animal feeds.

- Last, but not least, the *Aquaculture Stewardship Council* (ASC) is not yet operational, but already has plans to create standards that would certify 12 species that "have the greatest impact on the environment, highest market value and/or the heaviest trading in the global market." Standards for the ASC are being created during the Aquaculture Dialogues, sponsored by WWF, which are attended by fish farmers, other members of the aquaculture industry, government officials and non-governmental organizations.[xix]

What Does Sustainability Mean for Seafood?

A certification program should be transparent and should represent a clearly defined set of standards that are publicly vetted and easily accessible to everyone. Its primary motivation should be providing neutral and straightforward guidance to consumers. A label that makes vague claims of "sustainability" or being "eco-friendly" should not do so without being able to clearly define and support those assertions.

Although there is no single definition for sustainability or environmental responsibility for seafood, generally, for fish, as with many things, a sustainable choice is both ecologically and socially responsible. For many people, the carbon footprint is an important consideration, and in the case of food, how sustainable a product is for our health (in terms of contaminants and chemicals) can be an equally important issue.

For the purpose of this report, we consider that smart, or "sustainable," seafood choices take the following into account:

1. Ecological Impacts
    a. For wild fish, the fish in question should have a healthy population, and the current level of fishing in the fishery should not threaten other species dependent on that fish for food. Additionally, the fishery should not significantly threaten birds, marine mammals or other animals, or damage the marine habitat. The type of fishing gear used and its impacts on the seafloor and other marine wildlife are also important considerations.
    b. For farmed fish, water, chemical and feed use must be considered, as well as pollution discharge and impacts on wildlife and habitats.
2. Social Impacts
    a. Labor standards must be fair. Working conditions should be safe, and hours reasonable.
    b. Economic, health and safety impacts on surrounding communities must be considered. A farm or fishery should not negatively impact the local economy or public health, and must not cause safety concerns.
    c. Indigenous, traditional and cultural considerations should be upheld.
3. Encouragement of a diversified seafood economy: It is important that the seafood economy represent a variety of fish and shellfish options to benefit fishing communities, consumer health and ecological sustainability. When a few types of fish are marketed heavily, they can eventually become overexploited, resulting in negative ecological effects.
4. Transport and distance of product from the market: Many fish in the United States are imported from faraway places like Asia, or shipped around the world for processing before returning to the United States. Eating local, regional or domestic seafood helps to limit these fossil-fuel-consuming food miles.
5. Health and safety: Seafood must not be farmed with dangerous antibiotics, drugs and chemicals and must not pose the threats associated with contamination that worry many consumers.

Public vs. Private: Who Should Oversee Seafood Certifications?

The seafood certifications discussed in this report are run by private companies or organizations, and operate outside of governmental jurisdiction. Currently, there is only one federally mandated labeling program, country-of-origin labeling (COOL), which applies to seafood in the United States. COOL requires seafood to be labeled with the name of the country in which it was landed (brought to shore by fishing vessels) or farmed. Unfortunately, there are many loopholes in COOL; for example, exempting seafood that has been processed in any way (for instance, seasoned with salt, pepper or herbs) from labeling requirements. Additionally, it does not apply to restaurant menus.[xx]

Various logos used in fish certification programs

USDA "organic" certification does not yet apply to fish, but the agency is currently discussing proposed standards, which are highly controversial. The label applies only to farmed fish, not wild-caught, even though many people feel wild fish is often a preferable seafood option. This makes the label confusing for consumers, as many people feel "organic" is an indicator of higher quality.

Leaving seafood certification in the hands of private entities is problematic for a variety of reasons. First and foremost, it limits the general public's ability to participate in the standards-setting process. Although many certification programs do allow for public comment periods while they are developing their standards or certifying a certain fishery or farm, ultimately, it is the program's decision how to incorporate or use these comments. By comparison, a government entity developing such standards would be required to consider public opinion.

Additionally, private seafood certifiers or standards-setting bodies may face serious conflicts of interest. The incentive to put more "environmentally friendly" seafood on the market, or to establish a relationship with a fishery that many consumers would not yet consider sustainable, might influence some programs to put a label on a product that may not be called eco-friendly by a more neutral judge.

Common Concerns with Seafood Eco-Labels

Keeping the qualifications for sustainable seafood described above in mind, the following are 13 prominent issues that should be addressed in seafood certification. *[Disclaimer: The following section is designed to discuss overarching problems associated with private seafood certification programs, not to provide individual analysis of specific labels. Each concern is associated with at least one program, but they do not all apply to every program.]*

1. Certification of Flawed Fisheries

Some programs use their eco-label as incentive for a fishery or farm to make improvements. For instance, the Marine Stewardship Council (MSC) has traditionally viewed certification as a way to begin a long-term relationship with a fishery, meaning that they expect further improvement to occur after certification takes place.[xxi] After a fishery has been evaluated by a third party according to MSC's standards, the fishery may be granted certification, even if it falls short of certain standards.[xxii] The fishery is given conditions for improvement, but unfortunately, this means that a fishery with significant flaws may still carry the MSC logo, indicating sustainability, before it has achieved any improvements. This creates what is known as the "free-rider" problem, in which fisheries that are flawed, yet certified, get to ride on the reputation of the label.

Some critics have claimed that in many cases, few improvements are made after MSC certification. A 2008 paper observed that "there has been only one major ecological improvement related to the MSC certification program … and it is unclear if it can be strictly attributed to the direct effects of the MSC program" in the first place.[xxiii] In 2010, a widely publicized article written by prominent marine biologists Daniel Pauly, Jennifer Jacquet and colleagues, openly criticized the MSC, explaining that "as the MSC increasingly risks its credibility, the planet risks losing more wild fish and healthy marine ecosystems."[xxiv] The authors cited their concern that certain fisheries seeking the eco-label are not worthy of recognition for their sustainability, and suggested that the organization was in need of major reform if it wanted to fulfill its promise as "the best environmental choice."

The Aquaculture Stewardship Council (ASC), meanwhile, will follow a similar model — setting environmental and social standards not at the ideal, but just above the status quo (even if the status quo is quite far from any measure of sustainability). This allows a fishery to enter into the

program and achieve certification with the hope (but not the guarantee) that the status quo will gradually be pushed toward actual sustainability.[xxv]

2. Leaving Out Underfunded Fisheries and Farms

Paying for certification is expensive and many fisheries and farms are not able to finance the cost. Even Alaskan salmon, a very valuable and sustainably managed fishery in the United States, has had difficulties with financing MSC certification. Five species of Alaskan salmon (chinook, chum, coho, pink and sockeye) were first certified in 2000 and collectively have been a key part of the MSC portfolio for a decade. However, in early 2009, the Alaska Department of Fish and Game opted not to continue sponsoring the next phase of recertification. With up to $1 million in anticipated costs for the upcoming five-year certification,[xxvi] few groups seemed willing to sponsor the Alaskan salmon eco-label. Eventually, the Alaska Fisheries Development Foundation confirmed in February 2010 that it would assume the role as MSC's client for Alaskan salmon.[xxvii]

Maine lobster, another nationally recognized fishery, has faced similar issues. In early 2009, Maine Governor John Baldacci proposed creating a commission to pursue MSC certification of the local lobster fishery. Citing the growing number of food retailers that source products from MSC, Baldacci said, "If we fail to take this step towards sustainability, Maine lobsters could be shut out of major markets in this country."[xxviii] Now, to keep lobstermen in business, Maine taxpayers may have to shoulder the burden for this costly private certification.

Meanwhile, certification programs with lower costs may not be scientifically rigorous. For instance, Friend of the Sea (FOS) does not conduct any of its own studies on the fishery or farm in question. Instead, it relies on existing studies produced by the Food and Agricultural Organization of the United Nations, regional fishing management organizations, or national marine research authorities.[xxix] This means that, after reviewing the relevant written material, an auditor simply has to check a "yes" or "no" box to confirm or reject that each of the criteria is fulfilled. He or she can therefore perform a complete review of a resource within just a few days.[xxx] FOS suggests that their evaluation method allows for an expedited review and certification process, and makes the process less expensive for smaller fisheries.[xxxi] Unfortunately, this puts auditing in the hands of someone who may or may not have any expertise in the fishery or farm, and bases it on external documents that may or may not be up-to-date.

FOS requires no peer review after an audit has been completed, meaning there is little room for academic debate or stakeholder participation.

3. Conflicts Resulting from Labels Used for Marketing Purposes

More than just a source of information for consumers, eco-labels are often predominantly used as a marketing tool for seafood companies. Some labeling programs may be dependent, to a certain extent, on certifying an increasing number of fisheries in order to continue building their name and market share.[xxxiii] Thus, there is an inherent conflict between an organization's desire to maintain healthy oceans and a need to grow its own brand name. When these contradictory motives collide, objectionable certifications can result.

Bill Carvalho is the owner of a prominent West Coast seafood company called Wild Planet Foods that celebrates sustainably caught wild seafood. Bill believes that the goal of healthy, thriving fisheries is important, but has doubts about whether international eco-labels can adequately identify sustainable products for consumers around the world. He observes, "I have concerns that eco-labels represent a one-dimensional effort to educate consumers. They highlight only those fisheries that go through the expensive and extensive process of certification. Other best-choice fisheries unable to leap over those hurdles are left behind in anonymity with all uncertified products. A consumer cannot therefore differentiate between a great seafood choice that is simply uncertified, and a terrible choice product that is on everyone's list of seafood products to avoid."[xxxii]

Meanwhile, many seafood restaurants and retailers have begun sourcing their seafood predominantly or exclusively from fisheries that have been "certified" by these eco-labels, in an effort to show consumers they consider the environment and fisheries sustainability when purchasing. For example, Whole Foods has been a supporter and carrier of MSC-certified products almost since the program's inception.[xxxiv]

The increase in eco-label popularity may even give incentive for groups to create new labels for the purpose of marketing products they have a stake in promoting.

4. Inadequate Transparency and Public Input

Some certification programs lack sufficient transparency. For instance, Global Trust Certifications, Ltd. (GTC) lists only their general guidelines on their public website. Distribution of the standards is controlled, and interested members of the public must fill out a copyright disclosure form to gain access to them. The standards have strict limits on an individual's ability to review or generally discuss the material publicly.[xxxv] (In fact, in order for Food & Water Watch to review the GTC certification standards for their eco-label, we would have been required to sign the copyright disclosure form, obliging us to submit this report to GTC for review prior to publication.)

In comparison, MSC, ASC and some other labeling programs are much more transparent, making their standards more readily accessible to the public and holding meetings in which interested stakeholders can participate. However, some stakeholders have complained that after supplying comments regarding proposed certifications, these have not been fully considered and concerns they raised were not addressed. MSC's controversial decision to certify pollock caused the Alaska Oceans Program to conclude that their "objections process is not legitimate."[xxxvi]

5. Failure to Support a Diverse Seafood Economy

As discussed previously, a diverse seafood economy is necessary for supporting both the economic and ecological sustainability of fisheries and seafood consumption.

Extractive industries (such as fishing and fish farming) that wish to operate sustainably should allow for a broad range of participation from many different stakeholders in a community or region. In other words, a range of fishermen and farmers must produce sustainable seafood to maintain diversity and economic benefits. If the industry becomes too consolidated (owned by one or only a handful of fishing corporations) communities will no longer be able to meaningfully participate in the use and management of public resources, and the local economy will suffer. Additionally, focusing the seafood market on only a handful of species threatens those stocks' longevity and disrupts ecological balance to the ocean's food web. To prevent these problems, eco-labels would need to encourage the participation of a range of small-scale, community-based individuals and companies.

6. Failure to Fully Consider Carbon Footprint

By placing a standard seal of approval on a fish, regardless of whether it is consumed in New York, San Francisco, Tokyo, London, Sydney or elsewhere, most eco-labels fail to include "food miles" in their sustainability standards. For example, a consumer in San Francisco concerned with sustainability but unclear on the details of certification may choose eco-labeled New Zealand hoki, rather than uncertified farmed clams — not knowing that the former was flown thousands of miles to the supermarket and the latter was locally grown and collected less than 100 miles from home in a sustainable manner.

The International Coalition of Fisheries Associations estimates that nearly 40 percent of seafood is traded across international borders.[xxxvii] The carbon dioxide emissions, whether generated by sea, road or air, can be immense. In 2004, MSC's Chief Executive Brendan May conceded that all fish would be local in an ideal world. "But it's better to eat sustainably from afar than unsustainably from home waters."[xxxviii]

FOS is the only program evaluated here that addresses the issue of carbon dioxide emissions in seafood transportation. It provides a "carbon footprint calculator" to the seafood industry to estimate the amount of carbon dioxide emitted in the process of catching (or producing) the fish and transporting seafood to its final destination.[xxxix] They offer companies the ability to offset their carbon emissions by investing in forestry, renewable energy or carbon capture technologies — a controversial concept in itself.

7. Pushing Farmed Fish

Certification programs that work exclusively with farmed fish may, intentionally or inadvertently, promote the consumption of farmed fish. Generally, the intention of labeli

ng programs for farmed fish is to distinguish the more sustainable systems from other farming methods associated with various problems. But by exclusively labeling farmed fish, they may send the message that it is better than wild fish. For many types of fish, wild fish from well-managed populations are often a more sustainable option.

The WWF Aquaculture Dialogues program is in the process of setting standards for farmed U.S. seriola and cobia which will be used by the Aquaculture Stewardship Council.[xl] Seriola, or yellowtail, is farmed by Kona Blue Water Farms in Hawaii in open-ocean net pens.[xli] Their operation has been associated with farmed fish escapes, interference with marine mammals and the use of antibiotics to treat infections. It has been largely opposed by the Native Hawaiian community for interfering with traditional respect for and use of the ocean.[xlii] If it obtains an eco-label's seal of approval, many customers may purchase the fish with no knowledge of these concerns.

8. Depletion of Forage Fish

Forage fish, which are near the bottom of the food chain, are an important foundation for almost all ocean life. Without these "prey fish" in our seas, the marine food web could collapse.[xliii] Additionally, many food-insecure countries rely on the same small fish as a key protein source for residents, and fishing for them is a primary means of coastal employment. Overuse of these fish can harm both marine wildlife and people that need these fish most.

These fish are also caught and processed into fishmeal and/or oil, which is used as an ingredient in food for carnivorous farmed fish (fish that eat other fish for protein), such as Atlantic salmon and the fish produced by Kona Blue Water Farms, yellowtail.[xliv] It is also used to feed livestock.

Some programs certify forage fisheries; this allows fishmeal and fish oil manufacturers to claim their product is from a sustainable source. Some labeling standards may not sufficiently consider the role of forage fish in the ecosystem and the effect that its continual extraction will have on other fish, marine animals or seabirds that depend on it for food.

Additionally, some programs that certify farmed fish do not contain adequate standards for the use of wild fish in fish feed. One popular view of fish farming is that it can take the pressure off wild stocks by supplementing our seafood supply. While this can be true for farming mussels, oysters, tilapia or other species that do not require large amounts of wild fish in their diets, certain other farming systems rely on heavy extraction of "lower-value" fish to sustain their farmed stock. This can mean that more fish is put in to the farmed fish than is ultimately produced. For example, to grow one pound of farmed fish may require more than one pound of wild fish as feed. Some certification programs allow farms with a much higher "fish-in-to-fish-out ratio" to gain eco-certification.[xlv]

9. Allowance of Genetic Modification, Antibiotics and Hormones

Although some programs ban genetically engineered (GE) fish, not all do. Further, because infections are common on fish farms, certifications often allow some use of antibiotics. For instance, one set of standards allows both antibiotics and hormones to be used as long as they are used "in accordance with instructions on product labels and national regulations."[xlvi] Unfortunately, some countries may not have strict regulation or enforcement of guidelines for antibiotic and hormone use in animals destined for human consumption.

Right now, the standards pertaining to hormones and GE fish are of most relevance to tilapia production, because the international industry often relies on hormones to rear male-only fish in order to prevent uncontrolled reproduction and achieve speedier growth rates. Using a hormone

called methyltestosterone (MT), some aquaculturists turn genetically male fish into physical females and mate these transgender GE fish with normal males.[xlvii,xlviii] Eventually, a batch of all-male fish is produced.[xlix]

There are serious public health and environmental concerns surrounding the use of MT. The human risks of exposure to this hormone may include liver dysfunction and certain cancers.[l] MT has been documented to persist in the aquatic environment and sediment below fish farms long after being released in the form of medicated feed. This has troubling implications for worker health and the local environment, especially because it is common industry practice in some countries to dredge up pond sediment to "prepare soil" for crop production.[li] MT can also cause skewed sex ratios of untargeted organisms in the local environment.[lii]

10. Threats to Mangrove Ecosystems

Mangroves are the densely shrubby habitats that occur naturally at the border between water and land along many tropical coasts which a wide variety of marine creatures (including fish, birds, turtles and many mammals) call home. They help anchor soil, can provide a buffer from storms and help filter water. Unfortunately, mangroves are frequently destroyed or damaged for development of coastal shrimp farms in South America and Southeast Asia. Mangroves play an important role in coastal ecosystems, and their absence in parts of Southeast Asia may have contributed to the severe effects from the 2004 tsunami in that region.[liii]

The Mangrove Action Project (MAP), which works to manage, protect and restore the rich ecology of coastal mangroves, has been a vocal opponent of certain eco-certifications. Most concerning to MAP is that in one program, mangroves can be removed for "allowable purposes" as long as the farm replants "an area of mangroves three times the size of the area removed." However, mangroves can take dozens of years to fully develop, and replanting may never result in successful growth of a full system. MAP explains that their "years of collective experience in working to counter the negative effects of the shrimp aquaculture industry" has led them to "take a strong stance against this [the Aquaculture Stewardship Council] and other shrimp certification attempts." MAP says that current certification processes "exclude those peoples most affected by the industry's ongoing assaults" and say that ASC's process is "aimed in an inappropriate and environmentally dangerous direction."[liv]

11. Jeopardizing Worker Rights and Safety

With so much seafood produced in developing countries that have less stringent or poorly enforced labor laws, worker wellbeing is a critical issue in seafood production and there is concern that some certification programs may not sufficiently review labor standards. In 2008, the Solidarity Center produced a shocking exposé on laborers at shrimp farms and processing plants in Southeast Asia. The report details egregious human rights abuses in these facilities, including child labor, the total absence of healthcare services or even basic first-aid treatment for most workers, pitifully low wages, and work shifts of up to 26 hours in length.[lv] The Solidarity Center characterizes the creation of the Global Aquaculture Alliance and Aquaculture Certification Council as an attempt to mitigate the negative effects of the industry on its workers, but notes that its standards are sub-par. One of the flaws it documents in the Best Aquaculture Practices, for example, is that the standards do not mention any restrictions on the number of working hours, in an industry where working shifts often exceed 12 hours a day.[lvi] The Solidarity Center also observes that the Best Aquaculture Practices make "no mention of international migrant rights standards or best practices to prevent abuses like debt bondage, forced labor and human trafficking" — all documented abuses mentioned throughout the report.

12. Superseding Governmental Authority

Additionally, there is a concern that by exerting a powerful influence in the marketplace, private eco-labels may, in some cases, steer fisheries management away from the control of national governments — particularly in developing countries. As one study on the Marine Stewardship Council finds, "the MSC reregulates the coordination of the global fisheries away from public venues and into private arenas."[lvii] According to authors, the MSC "bypasses national laws and marginalizes fisherpeople."[lviii]

Even in developed countries, private labels can have an overwhelming effect, such that government laws are pushed aside. The MSC-certified New Zealand hoki fishery, for example, has been found to violate that country's fisheries act, which requires that adverse effects on the aquatic environment — such as its troubled history of deadly interactions with seabirds — be addressed and avoided.[lix] In British Columbia, MSC certified the collapsed Fraser River sockeye salmon fishery,[lx] despite that the fishery was at a fraction of its historic levels. In fact, management of the fishery had been so problematic that in 2009, the prime minister of Canada ordered a judicial

Signs in a New York grocery store.

inquiry into the collapse of the resource.[lxi] (Several weeks later, a once-in-a-century run of over 25 million fish returned to the Fraser River, perhaps smoothing over what might have otherwise remained an extremely controversial certification).[lxii]

13. Incongruence with FAO Guidelines

In 2005, the Food and Agricultural Organization (FAO) of the United Nations set standards for eco-labeling and certification programs for wild fisheries.[lxiii] Often seen as a benchmark, all of the eco-labels mentioned in this report that deal in wild fisheries have favorably compared themselves at one point or another to the FAO guidelines, providing them with an ostensible measure of legitimacy.[lxiv]

However, analysis of each of the aforementioned eco-label programs for wild fisheries against the FAO's guidelines found them lacking. While this review is not meant to be comprehensive, it provides a few examples where the labels fall short of FAO principles.

In October 2010, the FAO's Subcommittee on Aquaculture of the Committee on Fisheries approved the first global guidelines for aquaculture certification. These non-binding guidelines, which will go on to the full committee for approval in 2011, are intended to account for animal welfare, environmental impacts and socioeconomic aspects of certifications.[lxv] Several of the principles in these guidelines may be difficult for some of labels reviewed in this report to meet. For instance, they stress the importance of transparency in the standards setting process; call on aquaculture operators to pay for the mitigation of any damages they cause by polluting; suggest that considerations be made for small-scale farmers lacking resources to pay for certification; state that aquaculture should contribute to rural development and food security; and call for consideration of the precautionary approach, which states that risks to the environment, resource and people should be avoided, taking into account existing uncertainties and the potential consequences of being wrong. While the guidelines do lend support to third-party certification and private labeling, the principles included have merit and should be reviewed for government labeling programs.[lxvi]

Comparisons of Eco-Label Programs Against FAO Standards for Wild Fisheries*

	Description of FAO Standard	Explanation of Violation
MSC	Criterion 29.3: Requires identification of "adverse impacts of the fishery on the ecosystem"	Alaska pollock is being considered for re-certification despite a crashing population and some concerns about bycatch and impact to local communities.[lxvii] Also, MSC is currently considering certifying several reduction fisheries, which could be destabilizing to marine ecosystems that depend on forage fish as a primary food source.
	Principle 2.12: MSC certifies fisheries that fail to meet certain criteria. It mandates improvements that must be met in the future, but the label is granted in the meantime, meaning consumers may be buying a certified product that isn't fully compliant yet. This can be seen as failure to fully communicate the label's meaning.	MSC certifies fisheries that fail to meet certain criteria; it mandates improvements that must be met in the future, but label is granted in the meantime, meaning consumers may be buying a certified product that isn't yet fully compliant. This can be seen as a failure to communicate full information.
	Criteria 28 and 29.5: The fishery operates "in compliance with the requirements of local, national and international law and regulations," and under an "effective legal and administrative framework"	Certified New Zealand hoki has been found to violate that country's fisheries act, which requires that adverse effects on the aquatic environment (such as known bycatch of endangered seabirds) be avoided.[lxviii]
	Criterion 29.6: The fishery implements the "precautionary approach" to "protect the 'stock under consideration'"	Controversial certification of British Columbia sockeye salmon occurred even as a Canadian judicial review into collapse of the resource was ongoing.[lxix]
Friend of the Sea	Criterion 29.3: Requires identification of "adverse impacts of the fishery on the ecosystem"	FOS's certification of reduction fisheries, and companies such as Omega Protein that catch massive amounts of menhaden, could be destabilizing to the ecosystem and detrimentally affect water quality in the coastal mid-Atlantic.
	Criterion 59: "Proper records of standards and development activity should be prepared and maintained"	FOS's website does not publicly offer evaluations for many of their certified fisheries and companies; despite serving consumers internationally, some of these evaluations are only available in Italian.
	Criterion 128: The certification body "should carry out periodic surveillance and monitoring at sufficiently close intervals" to verify that the fishery continues to comply with criteria	FOS apparently performs an annual review — of stock status only — in the five years between each certification; many other factors should be taken into consideration to ensure that no other impacts on local ecology (such as the seafloor or new and unanticipated bycatch) are taking place.
IFFO's GSRS	Criterion 29.3: Requires identification of "adverse impacts of the fishery on the ecosystem"	IFFO's certification of fisheries destined for reduction could be destabilizing to marine ecosystems that depend on forage fish as a primary food source.
	Criterion 41: Eco-label standards "should not distort global markets"	Certification of reduction fisheries may distort global markets and cause food insecurity in developing countries.[lxx]

* GAA / ACC, GTC, Ltd., and ASC are not included in this analysis because they only certify aquacultured seafood.

Eco-Label Comparison and Breakdown

Table 1: Concerns Associated with Standards for Certifying Wild Fish, by Label

	MARINE STEWARDSHIP COUNCIL	FRIEND OF THE SEA (WILD CRITERIA)	INTERNATIONAL FISH MEAL AND FISH OIL ORGANIZATION
Prohibitive costs	⚠		
Ambiguous or non-transparent criteria	⚠	⚠	
Insufficient public input	⚠	⚠	⚠
Negative impact on marine animals	⚠	⚠	⚠
No carbon footprint standards	⚠		⚠
Certifies forage fisheries or their products	⚠	⚠	⚠
Free-rider problem	⚠		
Incongruent with FAO criteria	⚠	⚠	⚠

Table 2: Concerns Associated with Standards for Certifying Farmed Fish, by Label

	BEST AQUACULTURE PRACTICES (GAA)	FRIEND OF THE SEA (FARMED CRITERIA)	GLOBAL TRUST*	AQUACULTURE STEWARDSHIP COUNCIL **
Prohibitive costs	⚠		Unknown	TBD
Does not prohibit… GE	⚠		Unknown	TBD
antibiotics	⚠	⚠	⚠	
hormones	⚠		Unknown	
Ambiguous or non-transparent criteria		⚠	⚠	TBD
Insufficient public input	⚠	⚠	⚠	TBD
Certify farms with negative impact on mangrove ecosystems	⚠		Unknown	TBD
No carbon footprint standards	⚠		Unknown	TBD
Insufficient FCR standards		⚠	⚠	TBD
Free-rider problem				⚠
Insufficient worker safety	⚠		Unknown	TBD

*Because Global Trust's standards are not available to the public, it was not possible to verify whether certain concerns apply. Its failing grade on antibiotics and FCR are based on assumptions from the certification of one salmon farm.

** Because the Aquaculture Stewardship Council has not yet issued certifications, several of these categories are not yet determined. Because standards are being created separately for different species, different conditions may apply to each species. The issues with mangrove systems and free-riders are problems expected to arise based on Aquaculture Dialogue standards as currently written.

How Eco-Labels Have Changed the Marketplace

Looking to boost their "green" credibility, retailers and restaurants have turned to eco-labels as a straightforward way to buy and sell only "environmentally friendly" seafood. Wal-Mart, for example, made a splash when it announced in 2006 that it would source all of its wild fish products from MSC-certified fisheries within three to five years.[lxxii] Kroger Company (one of the nation's largest grocery retailers), Wegman's (with locations throughout the East Coast), U.S. Food Service (the second-largest food-service distributor to restaurants, cafeterias, schools and hospitals), and Supervalu (America's fifth-largest food retailer) are other companies that either sell MSC-certified seafood or have begun review processes to consider selling MSC-certified products.[lxxiii,lxxiv,lxxv,lxxvi]

Darden Restaurants, the large U.S. restaurant company that is the owner of a handful of well-known branded restaurants, including Red Lobster and the Olive Garden, committed in 2006 to source shrimp only from farms certified with the BAP seal by GAA.[lxxvii]

Partnerships between eco-labelers, retailers and restaurants can allow eco-labels to capture large amounts of the market, keeping sustainable but uncertified fish out of marketplaces and allowing questionable certified products to be dominant.

Surprisingly, in the absence of national standards, even state governments have incorporated private certifications into regulations. In October 2009, the state legislature in California enacted a bill that established standards for sustainable fishing practices, as well as a protocol for labeling and marketing of seafood sold in the state. It now gives the state's Ocean Protection Council the authority to set the sustainable seafood standards and create some sort of "California-certified" eco-label, whose logo is yet to be developed.[lxxviii] Although MSC is not explicitly named anywhere in the law, its three principles are used verbatim as guidance in the text of the bill,[lxxix] which would set a problematic precedent for the state if they are adopted without any strengthening.

Target Hits the Mark!

In January 2010, Target announced that it had eliminated farmed salmon from its more than 1,700 stores across the United States and that all sushi containing farmed salmon will be phased out by the end of this year. In its place, they'll be offering wild Alaskan salmon.[lxxx]

This decision to "go wild" will provide consumers an opportunity to purchase healthier, more sustainable seafood — even when buying from a mega-store like Target. Salmon farming is among the worst of environmental offenders when it comes to food production. In a lot of ways, salmon farms can be considered equivalent to the filthy and jam-packed confined animal feeding operations also known as factory farms. They often crowd too many fish into too small a space — in this case, open net pens in the ocean or coastal waterways — resulting in massive water pollution, threats to wild fish, degradation of important habitats and more.

Instead of relying exclusively on sustainability claims made by a certain certification program, Target took an independent step to remove a type of fish it recognized as problematic from its shelves.

Solutions

The lack of a national label or set of standards has allowed private eco-labels to capture large portions of the market, but the findings of this report suggest that private eco-labels are not adequate indicators of sustainable seafood choices for either consumers, restaurants or retailers. The plethora of labels on the market and the divergence of standards between them make it difficult for consumers to understand what they actually mean or know what to choose. Furthermore, these labels have allowed private organizations, and even companies with vested financial interests, to set the standards for sustainability with insufficient public input.

To address this problem, the federal government must step up and offer consumers some meaningful, well-defined and verified claims that can be used to describe environmentally and socially responsible seafood. Specifically:

I. The USDA should begin this process by extending the requirement for country of origin labels to all seafood. This would be achieved by closing the loophole created by the current definition of "processed" that improperly exempts much of the seafood consumed in the United States from mandatory labeling. This labeling would help consumers to distinguish between seafood produced under U.S. regulations and seafood produced in countries where environmental, health, safety and labor standards are often weaker.

II. Another USDA program, "certified organic," does not yet apply to seafood, but there is growing interest in developing organic standards and draft recommendations for farmed seafood are being discussed. Unfortunately, the proposed standards for organic seafood are problematic. For seafood production to live up to the principles of organic production, organic standards would have to:

- exclude production in open-water net pens
- require fully closed/contained systems[lxxxi]
- exclude the use of wild fish as feed
- require a 1:1 or lower fish-in-fish-out ratio
- require organic feed
- prohibit antibiotics, pesticides, hormones and genetic modification
- set standards for energy and water usage in production

III. The FDA should establish a program to define and verify claims made by labels about sustainable seafood. Considerations should include:

- contaminant levels
- the health of the fishery, including stock status, reproducing population and ecosystem interactions
- methods used to catch or raise seafood
- socio-economic impacts
- labor practices

The use of these labeling claims should be based on a verification program conducted by government employees. If

Open-Ocean Aquaculture: Too Big, Too Dirty, Too Dangerous

Open-ocean aquaculture consists of farming fish (usually high-value finfish) in very large, often overcrowded cages or "netpens" in the open water, sometimes miles off the shore. In the United States, industry proponents are pushing to open federal waters (typically three to 200 miles off the coast) to this practice, but legislation has thus far been opposed by environmentalists, consumer advocacy groups, fishermen, and other businesses and community groups. In these industrial fish farms, waste, uneaten feed, and any chemicals or antibiotics used in the operation flow freely from cages into the water. This can potentially cause damage to the seafloor and harm the organisms that live there. Additionally, farmed fish, bred for living in captive conditions, are prone to escape. Escaped fish can interbreed with or overtake wild fish, weakening wild stocks or displacing and outcompeting them for food, habitat and mates. Whether or not fish escape, they can also spread or increase diseases and parasites in wild fish.[lxxi]

the FDA cannot provide the resources to conduct these verifications, the agency could alternatively charge user fees to the processor wishing to use the claim, similar to the fees charged by USDA's Agricultural Marketing Service for its grading and marketing programs. This program would be separate from safety inspections conducted by FDA inspectors.

In the meantime, consumers can use the following questions at grocery stores, markets and restaurants to help assess the quality and sustainability of seafood.

1. ***Was it caught or farmed locally?***
   Often the shorter the distance food travels to get to your table, the less fuel is used to get it to you. You'll also have a better chance of supporting local fishing communities and getting fresher seafood.

2. ***Was it caught or farmed domestically?***
   Seafood safety standards in the United States are stronger than in many other places that supply our imported seafood. Choosing domestic can reduce the likelihood that your fish is contaminated with toxic substances that the United States considers illegal. And of course, you contribute to the U.S. economy.

3. ***Is it farmed or wild?***
   In general, choose wild-caught. If the answer is farmed, see tip # 5 below. Wild fish often carry fewer health risks for consumers than most farm-raised fish because they are not grown in large crowded cages with antibiotics and pesticides. Wild-caught fish aren't always perfect though — some types may contain higher levels of mercury or other pollutants, so consumers (especially parents and women that are pregnant or may become pregnant) should watch for warnings about which fish to choose for themselves and their children.

4. ***How is it caught?***
   Some fishing methods have high levels of bycatch or cause habitat damage. Ask whether the fish has been caught using sustainable methods.

5. ***How is it farmed?***
   Choose types of fish that need few inputs. Farm-raised mussels and clams can grow more easily without chemicals and antibiotics. Ask your grocery or restaurant about the type of farm seafood products came from.

   Avoid open water factory farm-raised finfish that require large amounts of wild fish as feed. Wild fish are used to produce feed for many farmed fish, taking food away from other marine wildlife and people that rely on smaller fish for food. Farmed fish are often grown in large, overcrowded open-water cages where fish waste, excess feed and any chemicals used in the operation flow straight into open waters. This can cause environmental harm and human health problems. Also, the large businesses that grow these fish often overtake independent fishermen and put them out of business, hurting smaller-scale, local fishing communities. Fish farmed in land-based recirculating systems are currently harder to find in the market, but are a more environmentally friendly option.

   When it comes to shrimp, choose U.S. wild (and/or U.S. land-based farmed if available). Avoid imported farm-raised shrimp. The FDA inspects less than 2 percent of seafood imports, meaning a large amount of contaminated shrimp could be reaching U.S. consumers.[lxxxii]

6. ***Is it associated with any contaminants?***
   Overall, try to eat a variety of fish — don't stick to just one type. By doing so, your exposure to possible seafood contaminants can be reduced. This also helps to lower pressure on wild fish that have become over-popular seafood choices. And always ask where your seafood comes from before you buy — you have a right to know! This will also prompt restaurants and markets to pay attention to what they buy once they know their patrons care. Learn about your seafood and share your knowledge with others.

For a handy guide that you can keep in your wallet and pull out when you're at a seafood market or sitting down to dinner at your favorite restaurant, check out our Smart Seafood Guide at:

http://bit.ly/seafood-guide

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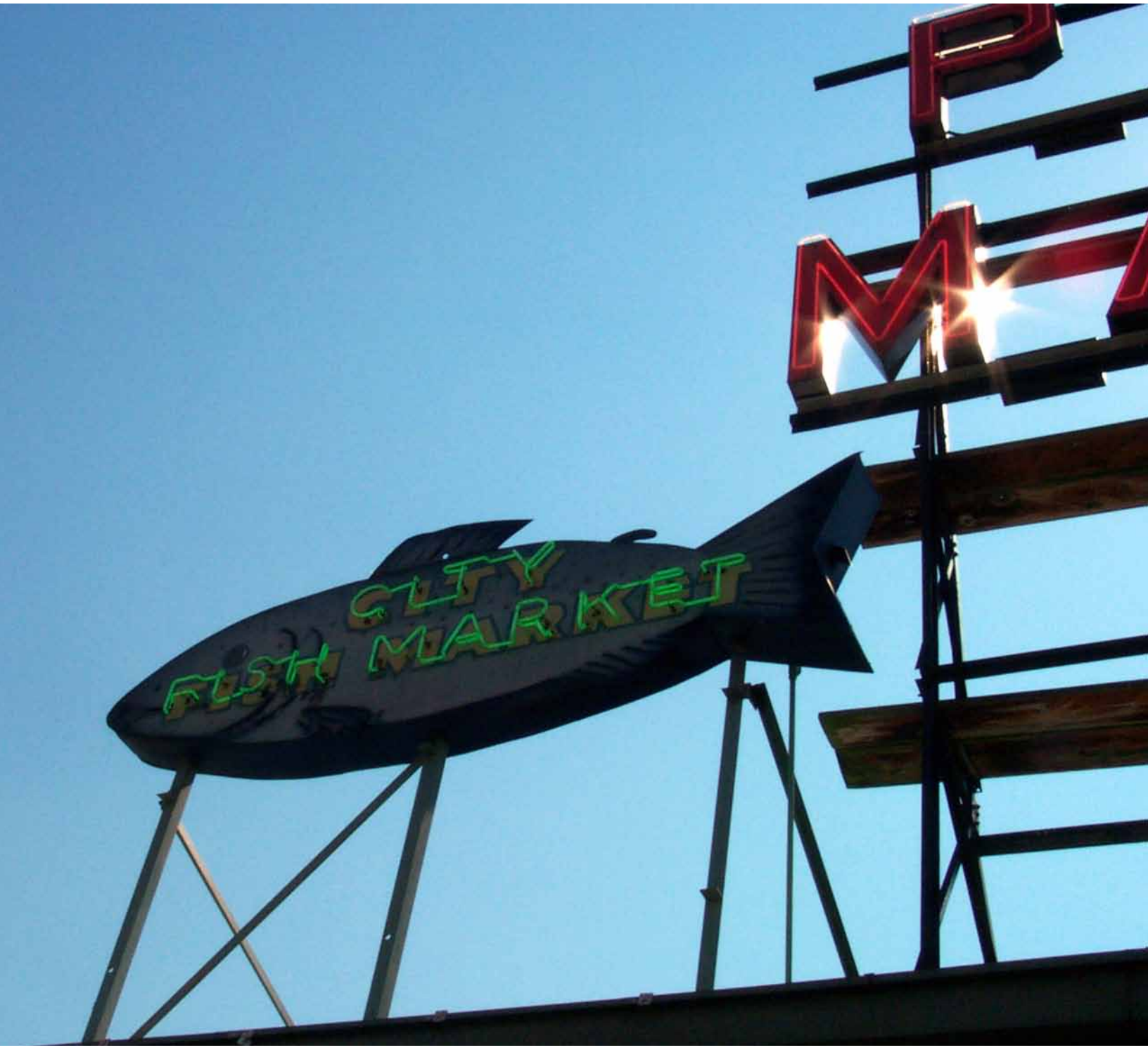

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