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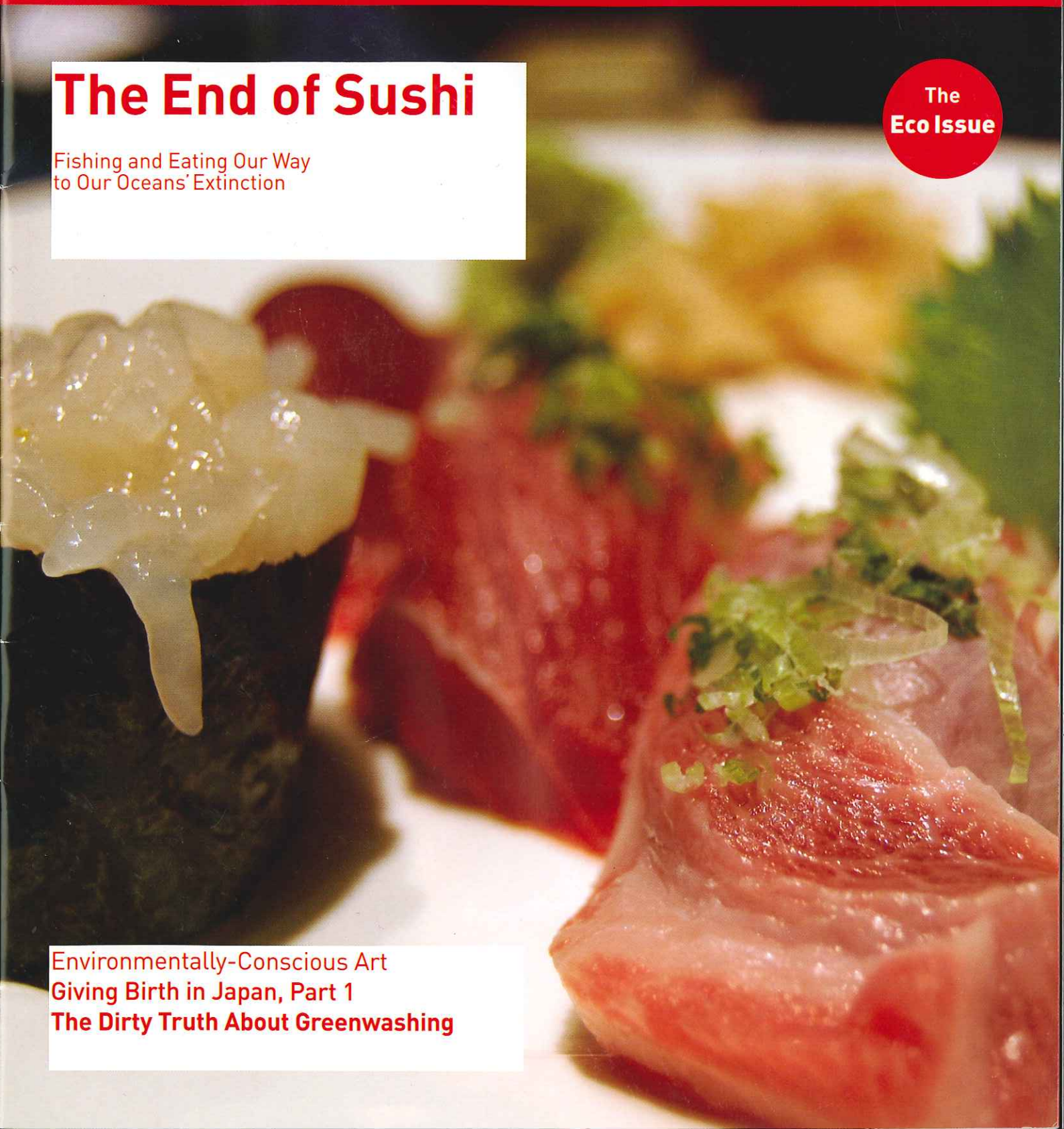


The End of Sushi

Fishing and Eating Our Way to Our Oceans' Extinction

The Eco Issue

Environmentally-Conscious Art

Giving Birth in Japan, Part 1

The Dirty Truth About Greenwashing

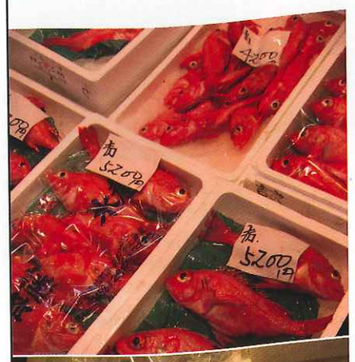
by Danielle Rippingale

The End of Sushi

Fishing and Eating Our Way to Our Oceans' Extinction

Our love affair with seafood is unsustainable. In Japan, where fish is a dietary staple and fishing statistics are not readily available, statements asserting that in 60 years we have harvested the oceans to the brink of collapse sound like a whale of a fish tale. The truth remains that both fish populations and entire fishing-based economies around the world are rapidly under threat. In 2007 CBS News reported that 29 percent of edible seafood species have declined by 90 percent, and in less than 40 years we will have cleaned out the oceans entirely.

Conservationists and scientists are unanimous in their recommendation that 30–40 percent of our oceans need to be closed to fishing if depleted fishing stocks are to recover and responsible fisheries management is to regenerate the industry.



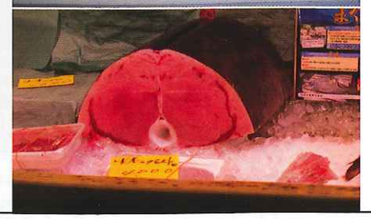


Photo by Danielle Rippingale

In *End of the Line* Charles Clover uses a powerful analogy for the unselective and devastating effect that bottom trawl fishing has on our oceans every day. Imagine a net with a rolling beam dragging across the plains of Africa, indiscriminately catching, wounding, and flattening every tree, animal, and obstruction in its wake. While highly efficient, the carnage and waste is undeniable, with one third of the catch dumped because it is too small, damaged, or not tasty enough.

Many desirable species are not even given a chance to spawn, pushing the industry to catch smaller juveniles as fish stocks decline. On land we seasonally plant and harvest, whereas we take from the oceans without replenishing the supply. The warnings of international scientists fall on the deaf ears of politicians, who are more concerned about global trade than the future of our oceans. In fact, even when designated by law, countries often fail to enforce off-limit fishing zones, forcing conservationists to take matters into their own hands in a bid to stop destructive bottom trawling (see **http://weblog.greenpeace.org/makingwaves/archives/oceans** for one example of this).

As the largest per capita consumer of seafood in the world, Japan's taste for fish is undeniable. The country is the primary market for bluefin tuna—one of the most threatened fish stocks in the world, with fisheries from Europe and the United States taking giant-sized bites out of this floundering species. Every morning approximately 1,000 fresh and 1,000 frozen tuna are auctioned at Tokyo's Tsukiji market, the largest wholesale seafood market in the world. The esteemed bluefin can grow in size to over 450kg, and can claim a princely sum of ¥5,000/kg at Tsujiki. Ironically, the popularity of over-exploited bluefin has lead to an oversupply in the marketplace, driving prices down. When asked if he thought the oceans were being overfished, a Tsukiji fisherman peered at me from behind his (rose-colored) glasses with an emphatic,"no!"

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Not only are fish stocks declining, but what is arriving at the table can have serious health concerns, particularly for pregnant women and children. Sea life filters industrial pollutants that have been carelessly

Rejected from next month's Tokyo Film Festival, the award winning documentary *The Cove* is a film that exposes not only the tragedy of dolphin slaughtering in Japan, but also the dangerously high levels of mercury in dolphin meat (incidentally often sold as fake whale meat) and seafood, the cruelty in capturing dolphins for entertainment, and the depletion of our oceans' fisheries by worldwide seafood consumption.

All photos by Phil Salt unless otherwise noted

Photo by Danielle Rippingale

dumped into our oceans, leading to toxic levels of mercury and PCB (polychlorinated biphenyls) in seafood.

Existence on land and in the ocean is threatened by overfishing. In the ocean, as on land, species extinction means that there is a critical piece missing from the food web, and an entire ecosystem is in danger of being forever out of balance. To illustrate, the popularity in Asia of shark and whale has seen predator species decline by 90 percent, which has lead to an increase in the populations of large fish that form their diet (e.g. octopus). While that may not seem like a bad thing, this species now requires more food to survive, and is in turn threatening the survival of prey species below it, which play an important role in filtering toxins, cleaning the coral reefs, and keeping algae blooms at bay. This chain reaction threatens the oceans' biodiversity, and ultimately the ability of the oceans to sustain our way of life.

While fish farming may seem like a good solution to the diminishing wild stocks, research suggests that farmed stocks are not always an environmentally responsible choice for several reasons: crowded conditions breed fish diseases that spread and threaten wild stock; the wide use of synthetic growth hormones, colorants, and steroids for market appeal; and the environmental damage from chemical use, such as that of shrimp farms. Some species, including salmon, are particularly vulnerable, and buying wild is actually a better choice for us and the environment, providing that fisheries manage well and consumers shop responsibly.

In a world ruled by convenience, global trade, consumer trends, and factory farming, we have become estranged from our connection to nature. Our greed contrasts traditional fishing practices that respected the relationship with nature, took no more than could be eaten, and honored the fish and ocean for their sacrifice (the Māori of New Zealand, for example, follow this practice).

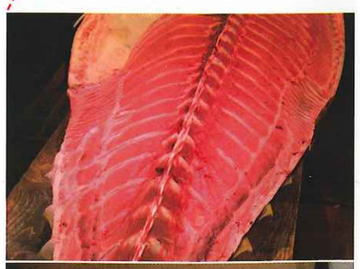
Casson Trenor, author of *Sustainable Sushi*, reminds us that *itadakimasu* (the Japanese word said before eating) can be literally translated as 'I take your life'—an acknowledgement that often one creature dies for another's survival. To be truly mindful of this is to understand that our choices as consumers have consequences, and if we are to protect the source and preserve the art of sushi for generations to come, we must learn to make better choices. *Sustainable Sushi* guides sushi-lovers to identifying species that are found at your sushi bar using pictures, kanji, a brief history, and an assessment of the degree of threat.

When asked if the average fish eater needs to eat less fish or choose fish with healthy stocks, Trenor replied, "Both. It's true that our current demand is outstripping the oceans' current potential to provide, but that's because of how badly we've damaged it through over-exploitation and destructive fishing methods. We can heal the ocean and rebuild its productivity, and we do that by using our money to reward fishermen that are doing the right thing. We can vote with our dollars, yen, euros—use them at the market to support suppliers and retailers that have the oceans' best interest in mind. If we do that we can start to change the whole industry."

Trenor further encourages sushi enthusiasts to look behind the Japanese 'language of sushi' in order to connect with a rich history that honored the local bounty that nature provided, rather than luxury bluefin, salmon farming, and antibiotic-stuffed eels. In other words, purchase local, sustainable, and seasonal seafood.

On land we seasonally plant and harvest, whereas we take from the oceans without replenishing the supply.

Environmental scientist David Suzuki believes that an ecosystem approach to fisheries management that includes diversity, looking after habitat, and understanding all the components of the marine food web—including the 'non-commercial' ones—is a step in the right direction. And finally, cooperation between the US, Europe, Japan, and China is imperative in order to save our oceans from our appetites.



Unsustainable—avoid	Sustainable—at this time
King crab	Stone crab
Blue crab	Mussels (farmed)
Snow Crab	Oysters (farmed)
Albacore (*Shiromaguro*) M*	Clams (farmed)
Bluefin Tuna (*Toro*) M & PCB*	Sardines (US pacific)
Amberjack (*Hamachi*)	Abalone (farmed)
Escolar (*Aburasokomutsu*) M	Geoduck (*Mirugai*)—farmed and wild
Freshwater Eel (*Unagi*) PCB	Skipjack Tuna (*Katsuo*)—hand-dlined or purse-seined only
Monkfish (*Anko/Ankimo*)	Mackeral: Horse (*Aji*); Spanish or King (*Sawara*); Atlantic (*Saba*) M
Octopus (*Tako*) PCB	
Salmon (Sake) PCB	
Scallops (*Hotategai*)—wild	
Sea Bass (*Suzuki*)	
Shrimp (*Ebi*)—wild and some farmed	
Snapper (*Madai*)	
Artic Surf clam (*Hokkigai*)	
Shark (all) & Swordfish	
Flatfish (*Hirame*) e.g. halibut, sole, flounder, fluke M & PCB	
Sold as *Maguro*: Yellowfin Tuna (*Aku*) M & Big Eye Tuna (*Mebachi*) M	

*PCB or M (Mercury) risk

Species absent from this list require consumers to consider the source and fishing methods in order to identify sustainable options. 'Unsustainable' includes stocks that are to be eaten with caution.

Ocean Wise Resources:

www.sustainablesushi.net
www.seachoice.org
www.vanaqua.org/oceanwise/sustainable-seafood.html
www.nmfs.noaa.gov/fishwatch
www.wwf.org.hk/eng/conservation/seafood/C0a.htm
www.davidsuzuki.org/Oceans/Fishing/

All photos by Phil Salt