EVENTS FOR OUR *Oceans*

THESIS PROJECT BY GREG YAGODA

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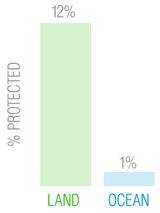
“THE OCEANS ARE THE PLANET’S LAST GREAT LIVING WILDERNESS, MAN’S ONLY REMAINING FRONTIER ON EARTH, AND PERHAPS HIS LAST CHANCE TO PROVE HIMSELF A RATIONAL SPECIES.”

John Culliney, *Professor of Biology, Hawaii Pacific University*

ABOUT 70% OF THE EARTH IS COVERED BY OCEAN. LESS THAN 1% OF THAT IS PROTECTED FROM FISHING.

As a result, our oceans have been and are continuing to be depleted of fish and other aquatic animals at a frightening rate. Today, 75% of the world's fisheries are either being fully exploited - fished to maximum capacity - or are overexploited to the point of collapse.[1] Each year, more than 170 billion pounds of wildlife are removed from our oceans.[2] To keep up with consumer demand, we are constantly pushing the limits of how many fish we can catch. We increase the number of boats we send out and develop more effective ways to maximize the number of fish we bring in. Many of these methods damage or pollute marine habitats. Once wild populations become sufficiently diminished, we look towards aquaculture, or fish farming, which is still a relatively new technology and presents several problems of its own. We can't continue fishing at our current rate and with these destructive fishing methods without comprising the future of our oceans.



Problems relating to overfishing may not seem to impact our daily lives, but because we rely on our oceans as a source of recreation, livelihood and food, these issues affect all of us. It may not seem like something we can control, but as consumers, we have the power to influence change. It is our responsibility to drive the market in a more responsible direction. By supporting more sustainable practices that can withstand over time, we can put pressure on political decision-makers, encourage which fish are being caught and the methods used to catch them, and ultimately alter the way our oceans are managed. Even with all of the media attention overfishing has received, the messaging has not been effective in clearly expressing the severity of this problem, and we continue to eat an increasingly large amount of fish from our oceans each year. If we care about the future of our oceans, we need to begin making more conscious decisions and start doing a better job as consumers.

170 BILLION

pounds of wildlife are removed from our oceans each year

=

3X

the weight of every man, woman and child in the United States

The demand for seafood continues to increase. More than 2 billion people rely on fish as a key part of their diet. However, the methods we use to provide fish for this escalating population has severe repercussions. The following four factors should be taken into consideration when buying or ordering fish:

BYCATCH refers to fish or other marine life that is caught inadvertently and discarded, often dead. It is caused by fishing methods such as trawling and longlining. One of every four fish caught is bycatch.

HABITAT DAMAGE can result from fishing methods such as trawling and dredging. Weighted nets are dragged across the seafloor, crushing life and damaging areas where fish live, feed and breed.

OVERFISHING means catching fish faster than they can reproduce. Globally, we fish at 2.5 times the sustainable level.3 There are too many boats chasing a decreasing number of fish.

AQUACULTURE, or fish farming, produces half of the seafood eaten in the U.S. Its impact widely varies, but it can damage environments and put stress on already diminishing wild fish populations.

MY BACKGROUND

When I turned 12 years old, my father and I got certified in scuba diving in the Cayman Islands. I instantly fell in love with the beauty of our oceans and was fascinated by the diversity of life below the water.

My early experiences scuba diving fueled a curiosity and passion for the oceans. I went on to complete my bachelor's degree in Environmental Studies with a focus on Marine Biology at Connecticut College. From these classes, I learned in greater detail about problems such as the overfishing of tuna and cod and the destruction of coral reef habitats. During my time at school, I worked at the Mystic Aquarium maintaining display tanks and educating visitors about various exhibitions. I spent a semester living on the island Roatan, Honduras surveying endangered coral reefs and accessing the health of the marine species living there. Collectively, these experiences allowed me to learn about and witness firsthand the decline of our oceans.

When I moved to New York City in 2004, I worked hard to learn about what I could do as a consumer to eat fish in a responsible manner. I consulted online fish guides and made a conscious effort to carefully choose which fish I ordered at restaurants or purchased at supermarkets. I was confused and frustrated upon realizing how difficult

it is to be a conscientious seafood eater. Often times, it isn't as simple as "eat this fish" or "don't eat this fish" but rather depends on the specific species, where it was caught and how it was caught. This information is rarely listed on menus or provided by your server at restaurants.

In September of 2009, I went back to school to study for my Master's in Visual Communications at Pratt Institute. Our thesis project is meant to address a specific problem with a creative solution. It was the perfect opportunity to fuse my talents as a designer with my passion for our oceans in order to contribute positively to solving the problems plaguing them.

Throughout my research, I have learned some shocking information regarding many of the fish and seafood we commonly cook at home or order in restaurants.

BLUEFIN TUNA

Thunnus thynnus

Bluefin tuna are a top marine predator and, unlike most fish, they are warm blooded. This allows them to regulate their own body temperature, resulting in several advantages. They are extremely fast. The heat supplied to their swimming muscles permits them to travel at tremendous speeds of more than 40 mph.[4] They are not restricted to specific water temperatures. They constantly migrate across seas and can be found at depths of more than 1,000 meters.

BLUEFIN TUNA can accelerate 40 mph, faster than a Porsche

Because bluefin are highly migratory and traverse across international borders, fishing quotas, which are set by each individual country, are difficult to regulate. As a result, bluefin tuna are disappearing quickly. They are considered to be critically endangered, putting them in a category with tigers, polar bears, giant pandas and black rhinos. Even before they were overfished, their populations were never as plentiful as other fish, such as cod, salmon or seabass. Though they can lay millions of eggs at a time, the majority are caught before they've had a chance to reproduce. Their red, steak-like flesh makes them highly sought after, especially among sushi lovers. Bluefin are currently the most expensive fish, with a single 513-pound tuna in Tokyo selling for $177,000.[5]

Bluefin are caught using a variety of different fishing methods, but purse seines and longlines are the most common, and also the most harmful. A purse seine is a large net that encircles a school of fish. This method results in large amounts of bycatch. Animals such as endangered sea turtles, sharks, dolphins, and seabirds are killed in the process, only to be tossed back in the ocean. Though fisheries have developed ways to limit the amount of dolphins caught from purse seining (a large problem in the late 1980s), solutions have not yet evolved to include the long list of other animals trapped in these nets. Sadly, there are no international laws to reduce the amount of bycatch by these fisheries.

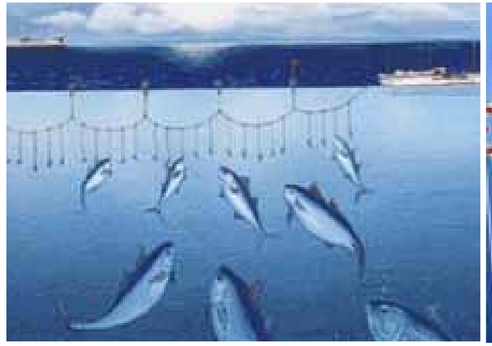
BLUEFIN POPULATIONS HAVE DECLINED BY 90% SINCE 1970.

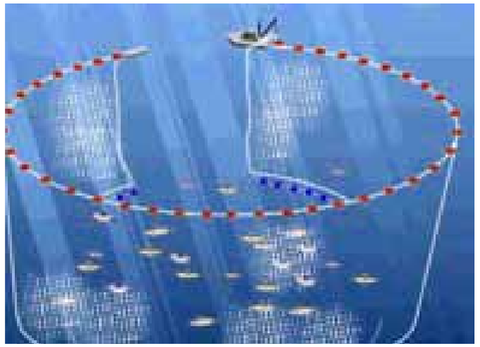
Longlining involves hanging smaller, baited hooks off a main fishing line that can be more than 50 miles long.[6] This method also results in a large amount of bycatch as the baited hooks attract a variety of marine animals.

More than 200,000 loggerhead turtles and 50,000 leatherback turtles, both on the endangered species list, were killed from longlining in the year 2000.[7]

In the past few decades, as technology has progressed, several fisheries have started farming bluefin in response to its steep decline. Beginning in Australia, this idea rapidly spread to countries such as Spain, Turkey, Libya and Cyprus.[8] Juvenile tuna are captured from the wild, raised and fattened in pens and sold to sushi markets in Japan once they reach optimal size. Few tuna are actually bred in captivity because it is much more expensive than catching them in the wild. So while the adult tuna are being overfished in the open oceans, their offspring are being collected and raised in nets. It's not surprising that bluefin populations have declined by 80% since 1970.[9] The International Union for Conservation of Nature (IUCN) has it officially listed as an endangered species. However, the Convention on International Trade in Endangered Species (CITES), an international agreement that regulates the trade of threatened species, is yet to ban the trade of bluefin. Though it has been recommended to be added to the list of CITES species on multiple occasions, the economic interests of countries like the United States and Japan have prevented this from happening.[10] The World Wildlife Fund predicts that if we maintain our current fishing levels of bluefin, it will be extinct by 2012.

200,000 LOGGERHEAD TURTLES AND 50,000 LEATHERBACK TURTLES WERE KILLED FROM LONGLINING IN 2000.





LONGLINE FISHING

Longlining employs a central fishing line that is strung with smaller lines of baited hooks, dangling at evenly spaced intervals. Longlines can be set near the surface to catch fish like tuna and swordfish, or laid on the sea floor to catch deep dwelling fish like cod and halibut.

50 MILES
possible length of central line

1.4 BILLION
hooks set each year from longlining

550
times you could circle the earth with wire used from longlining

PURSE SEINING

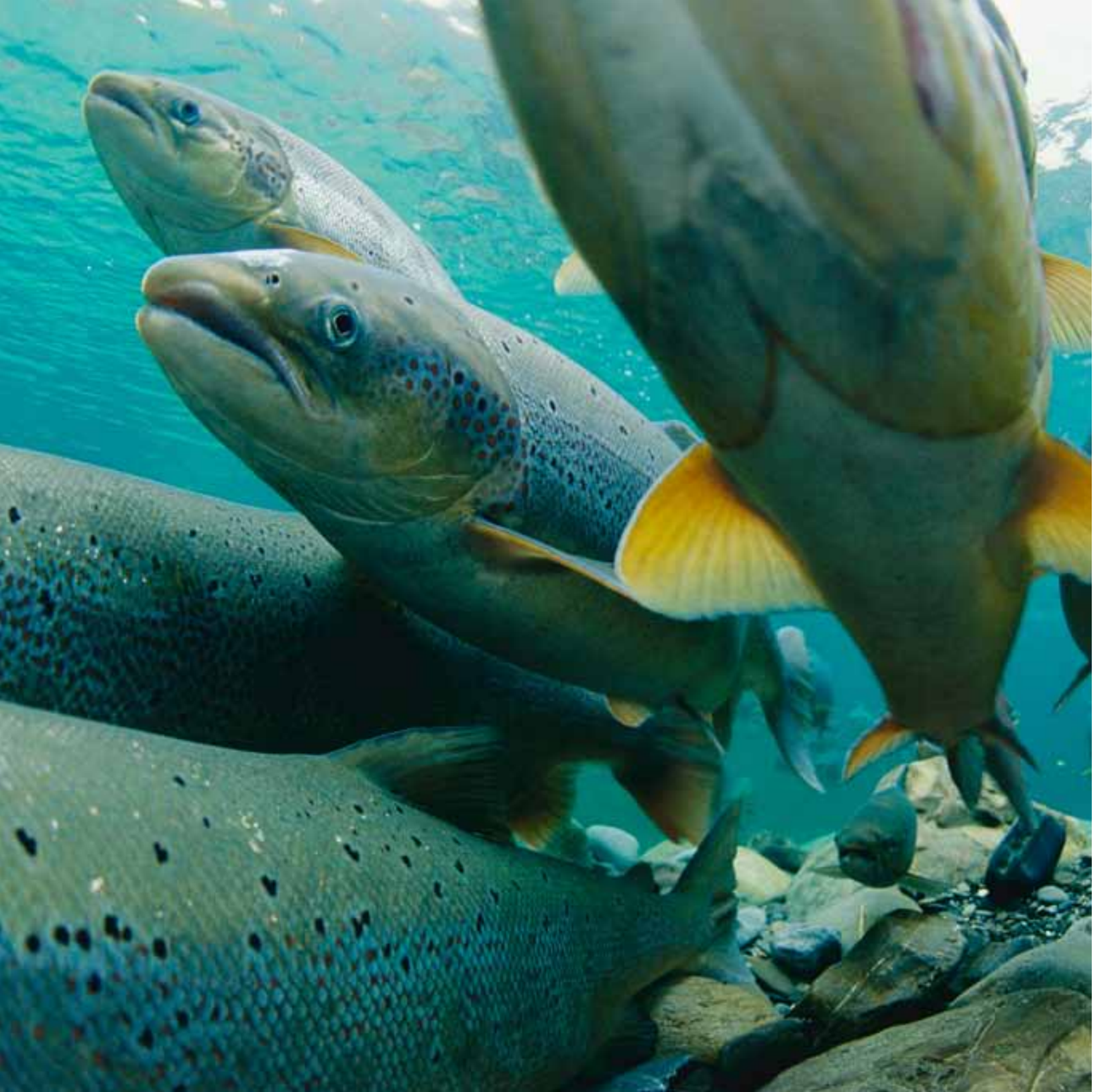
Purse seining involves setting a large wall of circular netting to encircle schools of fish. Fishermen pull the bottom of the netting closed like a drawstring purse to herd fish into the center. This method is used to catch schooling fish, such as sardines, herring, mackerel or squid.

6,000 FEET
circumference of the average net

570
purse seining vessels worldwide

60%
of the world's tuna catch

BOTH METHODS RESULT IN BYCATCH OF OTHER ANIMALS



ATLANTIC SALMON

Thunnus thynnus

Atlantic salmon, another top marine predator, spend the first few years of their life in freshwater rivers, but once they are old enough to seek out their own food and hunt larger prey, they travel to the Atlantic Ocean. After several years, when ready to reproduce, they swim back to the same spot they were born. Due to extreme overfishing, there are much fewer wild salmon making this trek. In the last 20 years, the amount of wild and farmed salmon consumed has doubled. As a result, the population of wild Atlantic salmon populations is currently estimated at 500,000 compared to what was once hundreds of millions.[11]

Today, a majority of the salmon we eat comes from fish farms. Salmon are easy to farm because, unlike most fish that hatch from small, microscopic eggs, salmon hatch from large, nutrient-rich eggs and can quickly transition into eating small pieces of fish.[12] Some of the larger aquaculture companies produce more salmon than the entire world's rivers combined. Costco, one of the world's biggest retail stores, didn't sell fresh fish a decade ago and now sells more than 16,500 tons of farmed salmon a year.[13] Unfortunately, the ways in which most salmon are farmed have several negative repercussions that make it detrimental to the environment and people's health.

Just as cattle face a higher risk of disease living in unnatural, confined areas, similar ailments threaten farmed salmon populations. Salmon anemia is a lethal disease that attacks the kidneys and circulatory system of fish and has killed millions of farmed fish throughout Europe and North America.[14] Sea lice are blood-sucking creatures that attach onto a host fish. They can contaminate entire farms and are easily transferable between farmed and wild populations. Drugs and pesticides are being used to prevent these illnesses and to kill parasites once an infection has broken out. However, since most salmon are farmed in large open nets, these chemicals pour straight into the ocean. As a result, there is a free-flow of biological waste (diseases and parasites), organic

EACH YEAR MORE THAN 3 BILLION POUNDS OF FARMED SALMON ARE PRODUCED - 3 TIMES THE AMOUNT OF WILD FISH HARVESTED.

IT TAKES THREE TO FIVE TIMES AS MUCH WILD FISH TO YIELD ONE POUND OF FARMED SALMON.

waste (feces and discarded food), and chemical waste (antibiotics and pesticides), which damage natural environments. This waste transfers diseases to wild populations, thereby harming other species and causing nitrogen waste to build up, killing algae and deoxygenating the water which many fish rely on to live.

Waste isn't the only thing that can escape into the open ocean. Each year, millions of farmed salmon break free from their pens to live, compete and possibly reproduce with wild populations. A highly energetic wild population of salmon is rapidly being replaced with a fatter, sluggish, domesticated form. Additionally, the offspring produced are less successful at returning to the freshwater river to reproduce, thereby negatively affecting the entire population of wild fish.

Perhaps most importantly though, salmon farms require a large amount of food to sustain them. More than 30 million tons of smaller fish are removed from our oceans each year, a majority of which is used to feed farmed fish.[15] Small, wild fish, such as sand eels, menhaden, capelin and blue whiting are ground up into pellets and used as feed for salmon and other farmed animals. It takes three to five times as much wild fish to yield one pound of farmed salmon.[16] This ratio is incredibly inefficient and puts stress on wild, sometimes overfished, populations. Additionally, high levels of poly-chlorinated biphenyls (PCBs) have been found in farmed salmon. Though the dumping of PCBs by electrical companies is now banned, these pollutants were absorbed by plankton and then eaten by smaller fish. These same contaminated fish are then ground up into pellets and fed to farmed salmon. Exposure

to PCBs can affect the cognitive development of children, negatively affect pregnancies and cause several types of cancer. Farmed salmon can contain as much as ten times the amount of PCBs as wild salmon.

Many people eat salmon because of the health benefits. It contains high levels of omega-3 fatty acids, known for their cancer and cardiovascular disease reducing benefits. However, despite being having a high fat content, farmed salmon has a much lower percentage of omega-3 fatty acid than wild salmon.

Regardless of all of the problems associated with salmon farming, each year more than 3 billion pounds of farmed salmon are produced, compared to one billion pounds of wild salmon.[17] Through fish farming, we are altering the evolution of a species, in addition to depleting wild populations of fish, polluting natural environments and putting our own health at risk.

FARMED SALMON

Though many people eat salmon for it's health benefits, farmed salmon contains:

20%
less protein

20%
more fat

10 TIMES
the amount of PCB's

3:1
ratio of omega-3 to omega-6
compared with 15:1 for wild salmon

SHRIMP

Thunnus thynnus

Imported shrimp, the most popular seafood in the United States and the most valuable in the world, can be wild caught or farmed, and both have equally devastating environmental repercussions.

Almost half of the shrimp consumed in the world is farmed.[18] Though shrimp farming occurs in more than 50 countries, poor, tropical countries in Asia and Latin America account for 99% of the production.[19] These farms greatly contribute to the pollution and destruction of coastal mangroves. Similar to farmed salmon, farmed shrimp are raised in high densities and are treated with large amounts of antibiotics and chemicals to prevent diseases. This biological and chemical waste flows directly into open environments thereby polluting sensitive ecosystems.

ALL SHRIMP THAT IS IMPORTED INTO THE U.S. MUST FIRST BE WASHED WITH CHLORINE BLEACH TO KILL ANY BUGS.

More than 3.7 million acres or 10% of all coastal mangrove forests have been cut down and converted to shrimp farms.[20] Mangroves are home to a wide variety of unique species marine life and serve as a nursery for many juvenile fish. Additionally, mangroves act as a buffer that protects the coast from heavy storms and tsunamis, potentially saving millions of lives. Local communities and fisheries that rely on this habitat as a source of income and food feel the impact most.

3.5 MILLION ACRES =

3.7 MILLION ACRES = number of acres of mangroves converted to shrimp farms (10%)

SHRIMP TRAWLING ACCIDENTALLY KILLS MORE THAN 1.8 MILLION TONS OF MARINE LIFE EACH YEAR.

The alternative, wild-caught shrimp, has more severe implications. They are typically caught using large trawl nets that can be the size of a football field. The nets are generally weighted at the bottom, causing them to drag along the ocean floor and destroy everything in their path. This method severely damages the seafloor and results in some of the highest amount of bycatch of any commercial fishery. For every pound of shrimp caught, anywhere from three to fifteen pounds of unwanted animals die as a result. Shrimp trawling accidentally kills more than 1.8 million tons of marine life each year, accounting for 25% of all bycatch.[21]

While some shrimp, especially in the United States, are caught in more sustainable ways, the high number of shrimp operations all over the world makes it difficult to track where they came from. Therefore, with more than 80% of all shrimp in the U.S. being imported, there is a more than good chance that other animals and environments were greatly affected in the process.

THE MOUTH OF THE BIGGEST TRAWL NET COULD FIT THIRTEEN 747 JUMBO JETS.

LEADING THE WAY

Fortunately, these problems are not being ignored and people's attitudes about the treatment of our oceans are gradually changing. There are many organizations working hard to educate consumers on responsible seafood choices and make sustainable options more widely available.

Blue Oceans Institute and Monterey Bay Aquarium have developed a color coded seafood sustainability rating system that makes it easier for consumers to identify which fish are the more responsible choice. The guide was further adapted into a pocket size foldout, a text message response program and an iPhone application that lets people share the locations of restaurants and markets selling sustainable seafood.

In September 2010, Whole Foods took this rating scale one step further. They partnered with Blue Ocean Institute and Monterey Bay Aquarium to use this labeling system for their fish counters in stores across the country. Shoppers can now identify which fish are the best, most sustainable options and which fish to avoid. Whole Foods plans to stop selling all fish rated "avoid" by Earth Day 2013, and phasing out a large majority before then.[22] Stores like Target and Wal-mart, the largest retailer in the world, have also started to eliminate many unsustainable seafood options and properly label where and how their fish was caught.

CHEFS ARE LEADERS IN THE CULINARY FIELD AND THEY SHOULD LEAD US IN THE RIGHT DIRECTION WITH THEIR CHOICES.

BLUE MOON FISH

Blue Moon Fish is a one boat fishing operation known to have the best local seafood in New York City, caught right off the coast of Eastern Long Island. Their stand can be found at the Union Square and Washington Square green markets in New York City and the Grand Army Plaza market in Brooklyn. They offer a list of more than a dozen different types of fresh fish and seafood. You just have to get there early and be patient as the demand for locally-caught fish continues to grow.

Many diners are becoming more interested in where their food comes from, how it was grown and how it ended up on their plate. The number of farmers' markets in the United States has increased 16% in the past year, with New York being one of the top five states with the total number of farmers' markets.[23] Whether it's because of health or environmental concerns, consumers are increasingly more likely to buy ecologically friendly products. As a direct result of consumer demand, an increasing number of restaurants are buying their ingredients from farmers' markets or local farms, and serving only sustainably caught or raised meat and seafood. Not only is this being used as a selling point, but it also puts pressure on other restaurants to do the same. New York-based chefs like Dan Barber of Blue Hill at Stone Barnes, Michael Anthony of Gramercy Tavern, Eric Ripert of Le Bernardin, and Peter Hoffman of Savoy serve a seafood-focused menu and believe that sustainability is an indicator as to the quality of food. Their diners know that whatever choice off the menu they make, it will be a responsible one.

While it may not be shocking that Whole Foods or trendy New York City restaurants are emphasizing sustainable food, institutions such as McDonald's and Wal-mart are doing their part as well. McDonald's purchases more than 43 million pounds of fish each year to make their Filet-O-Fish sandwich. More than 90% of that fish is sustainable Alaskan Pollock, certified by the Marine Stewardship Council (MSC)[24]. Because of this and other achievements, Gary Johnson, McDonald's senior director, has been recognized by the Seafood Choices Alliance for his efforts to reduce overfishing.[25] Wal-mart, the biggest retailer in the world, declared that by 2012 it would only be selling fish with the MSC label. Furthermore, they've been working with Conservation International to ensure that the shrimp they sell were farmed using the best practices. The conservation efforts that Wal-mart and McDonald's are making will encourage other supermarkets and restaurant chains to follow suit.

WHERE I COME IN

While much progress has been made to generate awareness of the problems facing our oceans and what can be done on a consumer level, there is still vast room for improvement. Many people care about our environment and are willing to do their part to contribute positively, yet often times lack the resources to do so or are uncertain about what the responsible decisions are.

So much information already exists on this subject, so for my thesis project I wanted to do more than just provide people with more statistics and facts. My goal was to connect people with this problem and involve them as part of the solution through hands-on, participatory, interactive events. I chose this approach with the belief that through their active engagement, people would have a better understanding of these issues, be more committed to changing their old habits, and be more likely to pass on the information they learned. Most importantly, I think supporting sustainable seafood should be enjoyable. It should not be a chore or something that causes frustration. People are more likely to support a cause that brings them pleasure.

For my thesis, I conceptualized, organized and led two dining events, a cooking class at Ger-Nis Culinary &

Herb Center and a dinner at applewood, a restaurant in Brooklyn. The goal was to raise awareness about the problems facing our oceans and promote sustainable seafood. Through these events, I actively involved the public, encouraging them to make increasingly conscious decisions and providing them with the resources to continue these ethical eating habits.

While my role initially began as a designer, it quickly evolved with the scope of this fast-paced project. I was required to take on the additional responsibilities of an event planner and promoter, a project manager, a partner, a communicator and a coordinator, a researcher, a writer and an educator. I spent time publicizing and generating interest for these events and was interviewed for two popular blogs, Brooklyn Based and Brooklyn the Borough.

Additionally, I utilized my talents as a designer to create a unique and cohesive identity to brand these two events. I developed a name and logo for each, along with a color scheme, a font family, and a look and feel that aimed to clearly convey the purpose or theme of the event. I worked with different organizations to incorporate this branding on websites and email blasts sent out to hundreds of their followers. I created a variety of print materials to promote ticket sales, provide information during the event

BLUE OCEAN INSTITUTE

Blue Ocean is an education and research organization that works to protect our oceans.

$10
of each ticket benefits Blue Ocean

53
total participants

$530
total amount of money donated to Blue Ocean

http://brooklynbased.net/sustainable-seafood-makes-a-splash-in-brooklyn

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Sustainable Seafood Makes a Splash

A sustainable seafood cooking class at Ger-Nis.

Elsewhere on Brooklyn Based

Double the Arts

Dog Days

Your eggs are organic. Your chicken is free-range. Your beef is grass-fed. But do you know where your halibut comes from? With Brooklyn's fishing village past long behind it, local restaurants and purveyors are more likely to stock farmed tilapia than pole-caught tuna or Jamaica Bay mackerel. That's changing though, thanks to ocean-minded entrepreneurs and activists around the borough.

Greg Yagoda, made the decision to devote himself to sustainable fishing after a scuba-diving trip where he witnessed first-hand how industrial fishing was decimating underwater ecosystems in the Caribbean.

After studying marine biology in college, he began searching for ways to eat responsibly and educate others about how to do the same. "I just remember how hard and confusing it was for me living in New York City to eat sustainable seafood," says Yagoda. "People eat grass-fed beef, but no one thinks twice about going out for sushi." Now a graduate student at Pratt studying visual communications, Yagoda has found a way to fuse his passion for the ocean with his upcoming thesis. "I felt that there was a lot of confusing information out there and that not many people were going to take it upon themselves to do the research." The result has been two events he's organized in Brooklyn in the hopes of educating people about how to eat seafood responsibly. The first, a cooking class at Ger-Nis taught by Franny's chef, John Adler, was a huge success. For ocean lovers who may have missed it, Yagoda is spearheading a dinner on April 12 at Applewood in Park Slope in collaboration with chef David Shea. The menu is based around sustainably-sourced seafood and a portion of the ticket sales to the event will go to the Blue Ocean Institute, an organization focused on ocean-centric research and education.

and serve as an educational resource for people to take with them. To advertise the event, I produced postcards and posters to distribute in stores and hang in store windows. I designed table cards, recipes guides and dinner menus to utilize at the actual event. Lastly and most importantly, I developed take-away materials with general information about the issues facing our oceans, a card with ten things you can do as a consumer to help, and the recipes from each event with information on what makes the fish featured a responsible option. Participants not only got to experience cooking or tasting these sustainable dishes, but now had the resources to replicate them and continue these ethical eating habitats.

SUSTAINABLE SEAFOOD
DOING YOUR PART

GER-NIS

Culinary & Herb Center

540 PRESIDENT ST., BETWEEN 3RD & 4TH AVE.

WEDNESDAY, MARCH 9TH
6:30P.M. - 9:30P.M.

$55 $10 of each ticket goes to Blue Ocean Institute

THIS CLASS WILL BE HOSTED BY

FRANNY'S CHEF
John Adler

FOOD AUTHOR
Tamar Adler

DESIGNER
Greg Yagoda

RECIPES WILL INCLUDE

STEWED SQUID
with chickpeas and peppers

RUSTIC BRANDADE
with country style bread

BUY TICKETS ONLINE AT: **CULINARYHERBCENTER.GER-NIS.COM/SUSTAINABLESEAFOOD**

AN EDUCATIONAL COOKING CLASS TO INFORM PARTICIPANTS ON THE IMPORTANCE OF EATING SUSTAINABLE FISH.

I decided to organize a cooking class as it was the ideal way to involve people as part of the process and provide them with information to make responsible choices when it comes to buying or cooking seafood. The seafood featured in each dish, mussels, squid and swordfish, were selected because they are raised or caught in ways that don't affect marine environments.

John and Tamar Adler, two chefs who have dedicated their lives to food, conceived the recipes for the evening. John is currently a chef at franny's, a restaurant in Brooklyn known for their lines out the door and their commitment to using seasonal and sustainable ingredients. Tamar is a food author and chef with her first book, An Everlasting Meal, being published in October 2011. This brother-sister team was the perfect match to help lead and execute this event.

I approached Ger-Nis Culinary & Herb Center in Brooklyn with the idea for this class because they regularly host cooking classes on a wide range of topics. They were thrilled to host a sustainable seafood cooking class as it was a first for them and they had wanted to do a class on this subject for a long time. Tickets were sold out more than one month prior to the event.

While participants sipped wine and snacked on mussels prepared by John and Tamar, I introduced the event. I provided some background information on the current status of our oceans and explained why the fish being prepared that night were sustainable options while addressing some of the problems with other more commonly ordered alternatives. The Adler's started off the cooking class by demonstrating how to clean squid and allowing participants to try it themselves. They showed how to prepare two seafood recipes teaching the class everything from dicing an onion to braising swordfish in milk. For three hours, 26 people learned how to prepare seafood recipes and engaged in sustainability related conversation with their neighbors, while eating some delicious seafood at the same time.

As the night came to a close, I handed participants a packet of information that I produced. In it contained a Blue Ocean Institute seafood sustainability guide, the three recipes from the evening with explanations as to what makes the seafood used in those dishes sustainable, and other background information about ocean issues. This packet of materials will serve as a reminder of the event's purpose and a resource so participants can continue these ethical eating habits.

GER-NIS

Culinary & Herb Center

Ger-Nis Culinary & Herb Center, located in Brooklyn, offers a wide range of cooking and educational classes to promote healthy eating and living habits through a hands-on and lecture style classroom. With an exceptional understanding of the culinary needs of their students, Ger-Nis focuses on the entire cooking and eating process, from farmer to chef to table. They host classes that allow students to learn about the origin of the foods they eat and how to prepare both elaborate and simple meals.

TAMAR ADLER

Food author & chef

Tamar Adler has promoted and worked with sustainable food in a variety of different ways. She was the founding head chef of Farm 255 in Athens, GA, which produces much of its own food at a farm a few miles way, and a former cook at Chez Panisse, a pioneer in the local and seasonal food movement. Tamar has also worked with Dan Barber, chef of Blue Hill at Stone Barns, researching sustainable agriculture. In 2008, she started the second meat CSA in the country, the Bay Area Meat CSA in San Francisco. Her career continues to blossom as her first book, An Everlasting Meal, will be published by Scribner in October 2011.

JOHN ADLER

franny's chef

Johnathan Adler was taught to cook by his mother and fell in love with food over family dinners. He got his first professional cooking job soon after graduating from Wesleyan in 2003 and has been cooking in restaurants ever since. He worked in prestigious kitchens such as Blue Hill at Stone Barns and Per Se, and spent months abroad training at Arzak, Le Manoir, and St. John. Yet, he found his home in the modest Brooklyn restaurant franny's, creating mouth watering dishes that emphasize fresh, local and seasonal ingredients.

STEAMED MUSSELS

with fennel & white wine

2 pounds mussels, washed, little beards removed
1 medium white onion, thinly sliced into half moons
1 bulb fennel, thinly sliced into half moons
4 cloves garlic, smashed and chopped
1 cup white wine
juice of 1 lemon
1/2 cup extra virgin olive oil
2 cups roughly chopped parsley leaves

1. Heat half of the olive oil in stockpot. Add onion, fennel, garlic, and cook over medium-low heat until translucent, about 5-7 minutes.
2. Add white wine, bring to simmer, and cook until it has cooked off, about 2 minutes.
3. Add mussels, cover with tight fitting lid and steam, shaking pot occasionally, until mussels open, about 7-10 minutes. Discard any that don't open.
4. Add half of the parsley.
5. Spoon mussels and contents into a big, shallow bowl. Drizzle with lemon juice and remaining olive oil, and top with remaining parsley.
6. Serve with toasted or grilled country bread, lightly rubbed with garlic.

MUSSELS

Mysilus edulis

MUSSELS are farmed in an environmentally responsible way throughout the world and are available all year round. They get their nutrition from filtering suspended particles in the water and therefore, unlike many other farmed fish, don't depend on wild caught fish as a source of food. Furthermore, while diseases are a major concern with other farmed species, diseases are uncommon in mussels, so the use of antibiotics and chemicals aren't necessary. Mussels are typically grown on long ropes suspended in the middle of the ocean, not on the seafloor, which eliminates any possible habitat damage.

> MUSSEL FARMING IS PERHAPS THE MOST BENIGN, AND THE LEAST ENVIRONMENTALLY DISRUPTIVE OF ALL FORMS OF AQUACULTURE.
>
> Richard Ellis, *The Empty Ocean*

SQUID STEW

with chickpeas & tomatoes

2 15 oz. cans chickpeas, rinsed and drained in colander
1 pound squid, cleaned and cut into ½-1 inch rings
1 ½ medium onions (or 1 cup), medium diced
6 cloves garlic, smashed and chopped
2 32 oz. cans of whole peeled tomatoes, drained and roughly chopped
1 ¼ cup roughly chopped parsley leaves
1 teaspoon pimenton or smoked paprika
1 tablespoon dried red chili flakes
2 cups white wine
½ cup water
extra virgin olive oil
sherry vinegar or sherry

1. In a flat-bottomed saucepan, heat ¼ inch olive oil until just shimmering.
2. Add onions and garlic. Salt lightly. Cook until they are just beginning to brown.
3. Add drained chickpeas and cook until they take on a light golden color, about 3-5 minutes.
4. Add pimenton and chili flakes.
5. Add wine and cook until ¼ has cooked off, about 3-5 minutes.
6. Add chopped tomatoes, water and 1 cup parsley.
7. Mix through, bring to a boil, lower to a simmer, cover, and cook 15 minutes.
8. Add squid and stew until squid is tender and creamy, about 1 ½ hours. Add salt to taste.
9. Turn off heat and add a few drops of sherry vinegar or sherry.
10. Serve warm, drizzled with olive oil, topped with remaining parsley, with toasted country bread.

SQUID

Illex illecebrosus

SQUID are found in the Atlantic Ocean from Northern Canada to Florida, but are fished commercially from Newfoundland to North Carolina. They grow quickly, mature in less than a year, and can produce up to 400,000 eggs at one time. This helps them withstand heavy fishing pressure. Squid are available frozen most of the year, but are only available fresh in the summer and fall.

Most squid are caught by trawling, which does result in some bycatch, but this amount is considered minimal. Unwanted fish and other marine animals make up less than 1% of the intended catch, compared to some shrimp fisheries where bycatch can make up more than 85%. Additionally, trawling, which can typically damage marine habitats, is less of a concern with squid because they swim above sandy bottoms, which are more resilient.

“SQUID PLAYS AN IMPORTANT ROLE IN THE WORLD’S OCEANS, AND THE SOUND MANAGEMENT OF ITS FISHERY IS NEEDED TO SUSTAIN THE MARINE FOOD WEB.”

Paul Johnson, *Fish Forever*

RUSTIC BRANDADE

with country bread

1 pound flaky white fish (swordfish or bluefish)
1 medium potato cut into 1-2 inch chunks
6 cloves garlic, smashed and chopped
2 bay leaves
½ cup extra-virgin olive oil
2 quarts whole milk
1 cup roughly chopped parsley leaves
salt and freshly ground black pepper

1. Coat fish heavily with salt. Place on a baking cooling rack over a toaster tray. Cover with plastic wrap. Refrigerate overnight.
2. Put cut potatoes in a pot . Cover with cold water by 1 inch. Bring to a boil and then reduce to a simmer.
3. In a separate pot, combine milk, garlic, and bay leaves. Bring to a simmer, then reduce to a murmur. Add the fish to the pot and cook until fish flakes easily when prodded with a spoon, about 5-10 minutes.
4. Remove fish and put on a plate. Reserve garlic and milk. Discard bay leaves. When fish is just cool enough to touch, flake into small pieces and set aside.
5. Cook potatoes until easily pierced with a fork. Strain and mash, using a potato ricer or food mill, into a large mixing bowl.
6. Using a spatula, add seasoned milk to potatoes until they're just mixable, beginning with 1 tablespoon, only mixing once or twice. Add flaked fish and olive oil. Mix vigorously until olive oil is fully incorporated. Taste and adjust salt and pepper
7. Add chopped parsley and mix through.
8. Spread brandade 2 inches deep into shallow baking dish. Bake at 425 degrees for 12 minutes, until top is browned and bubbling.
9. Serve with toasted or grilled country bread, lightly rubbed with garlic.

ATLANTIC SWORDFISH

Xiphias gladius

SWORDFISH, known for their sharp, pointed bill, are large migratory fish found in temperate and tropical waters of the Atlantic, Pacific and Indian Oceans. They grow reasonably fast and mature quickly. Atlantic swordfish can be divided into two groups, the North and South Atlantic population. Though swordfish were overfished from the 1960s through the 1990s, the Give Swordfish a Break campaign in 1998 led by National Resources Defense Council and SeaWeb helped restore North Atlantic swordfish populations. They are now considered to be fully replenished.

Ideally, swordfish should be caught using handlines or harpoons, which are more selective and result in little to no bycatch. However, most swordfish worldwide are caught using longlines, which may result in unwanted catch of endangered animals like sharks, seabirds and sea turtles. The U.S. has strict bycatch regulations, but other countries don't necessarily abide by these rules. When buying swordfish, it is therefore important to ask how this fish was caught and where it is from.

"THE RECOVERY OF SWORDFISH IS ONE THE FEW BRIGHT LIGHTS IN THE OTHERWISE DISMAL STORY OF OVERFISHING."

Richard Ellis, *The Empty Ocean*

AN EVENING FOR OUR OCEANS

a dinner at **applewood** to promote sustainable seafood.

TUESDAY, APRIL 12TH

6pm

COCKTAIL HOUR & HORS D'OEUVRES

7pm till 10pm

4 COURSE DINNER & WINE PAIRINGS PRESENTATION

Chef David Shea & event organizer Greg Yagoda will team up to discuss why the fish featured at this event are environmentally responsible choices.

CALL APPLEWOOD TO RESERVE A SPOT: 718.788.1810.

Tickets are $95 with $10 from each ticket benefiting **Blue Ocean Institute**, an education and research organization that works to protect our oceans.

applewood

501 11th street, brooklyn, ny
www.applewoodny.com

A FOUR COURSE SUSTAINABLE SEAFOOD DINNER THAT'S GOOD FOR YOUR PALLET AND YOUR CONSCIENCE.

Though the cooking class involved students through hands-on learning and participation, I understand that cleaning squid is not for everyone. Through my second event, my goal was to expose diners to fish they might not typically cook at home or order at restaurants. I wanted them to be blown away by how delicious these sustainable options could be. I teamed up with applewood, a farm-to-table restaurant in Brooklyn, to create an elegant dining experience based solely on sustainable seafood as a way of making these lesser-known fish more desirable.

The event kicked off with a cocktail hour and passed hors d'oeuvres, including lobster rolls, Rhode Island scallops with a pesto dipping sauce, and wild Alaskan salmon and crème fraiche - a twist on bagel and lox. These were chosen to expose people to a wider variety of sustainable options in addition to the fish featured for dinner. Diners mingled with new faces and caught up with old friends as they shared tales of fishing and exchanged questions related to sustainable seafood.

Eventually, diners found their way to their seats and the heart of the evening began. Chef David Shea created a unique four-course tasting menu, each featuring a different sustainable fish – Atlantic hake, Spanish mackerel, striped bass and sockeye salmon – along with an appropriate wine pairing. Chef Shea modeled each course after typical unsustainable seafood dishes, such as fish and chips and tuna casserole, but gave them his own twist, transforming them into delicious and responsible adaptations of the original dish. It also gave me the opportunity in between each course to discuss why the fish being substituted were sustainable choices and highlight some of the problems with commonly ordered alternatives, such as cod, tuna, or farmed salmon.

Diners walked away that night with a packet of information I produced containing a Blue Ocean Institute seafood sustainability guide, Chef Shea's recipes from that night with an explanation of what makes each fish featured a responsible choice, and a card with a list of ten simple things people do as consumers to benefit our oceans. The evening was a huge success. Diners licked their plates clean, laughed with their friends and neighbors, and learned something new about eating sustainably that they will hopefully remember in the future.

APPLEWOOD

Brooklyn Restaurant

applewood was a perfect place to host this event. They are already extremely committed to serving sustainable food and educating their diners on the importance of eating food grown or raised in responsible ways. They are dedicated to only buying and serving wild fish caught in ways that don't impact marine ecosystems.

They've also had experience producing similar events. Every month, they host a Meet the Farmer dinner where diners can enjoy a delicious meal while listening to a presentation by one of applewood's farmers. This is one of the main features that distinguish applewood from other restaurants. They take it one step further than most by hosting educational dinners that teach diners where their food comes from and connects them to the people producing it.

DAVID SHEA

Chef of applewood

David Shea grew up in Greenwich Village. He attended the Culinary Institute of America in Hyde Park, NY, where he met his wife Laura. After graduating in 1997, they moved to Chicago where David quickly established a stellar reputation as a chef.

He started working as the Executive Chef of the three-star, fine dining restaurant, Spruce, and went on to work as the Executive Chef at the newly opened Twelve 12.

David and Laura moved back to New York in 2003 to follow their dream and open their own place. They found the perfect space in Park Slope that matched their vision exactly. In September of 2004, their dream became reality when they opened applewood.

applewood distinguishes itself from most all other restaurants with their complete devotion to supporting local farmers, their exclusive use of hormone and antibiotic-free meats and poultry, as well as wild fish, and their on-site butchering of whole animals including lamb, goat, deer, and pigs.

FISH AND CHIPS

with crispy crusher potatoes and lemon aioli

FOR THE BATTER:

2 cups flour
1 tablespoon baking powder
1 teaspoon kosher salt
1/4 teaspoon cayenne pepper
dash of Old Bay seasoning
1 bottle brown beer, cold

FOR THE FRIES:

1 gallon safflower oil
4 large russet potatoes
Kosher salt

FOR THE FISH:

1 1/2 pounds firm-fleshed hake,
cut into 1-ounce strips
Cornstarch, for dredging
Malt vinegar, to taste

1. Heat oven to 200 degrees.
2. Heat the safflower oil in a 5-quart Dutch oven over high heat until it reaches 320 degrees.
3. Using a V-slicer with a wide blade, slice the potatoes with the skin on. Place in a large bowl with cold water.
4. In a bowl, whisk together flour, baking powder, salt, cayenne pepper, and Old Bay. Whisk in beer until batter is smooth. Refrigerate for 15 minutes.
5. Drain potatoes thoroughly, removing any excess water.
6. When oil reaches 320 degrees, submerge the potatoes in the oil. Working in small batches, fry for 2 to 3 minutes until they are pale in color. Remove from oil, drain, and cool to room temperature.
7. Increase the temperature of the oil to 375 degrees. Re-immerse fries and cook until crisp and golden brown, 2-3 minutes. Remove and drain on roasting rack. Season with kosher salt while hot and hold in the oven.
8. Allow oil to return to 350 degrees. Lightly dredge fish strips in cornstarch. Working in small batches, dip the fish into batter and immerse into hot oil. When the batter is set, turn the pieces of fish over and cook until golden brown, about 2 minutes. Drain the fish on the roasting rack.
9. Serve with malt vinegar.

ATLANTIC HAKE

Merluccius bilinearis

ATLANTIC HAKE, a relative of the cod family, were once extremely overfished, but have since fully recovered. They grow fast, mature at a young age, and produce millions of eggs every year, making them more resilient to substantial fishing pressure.

Hake are typically caught using bottom trawls, a method which for many fish can result in a considerate amount of bycatch and can also damage the ocean floor. Shrimp trawling, for example, accidentally kills more than 1.8 million tons of marine life each year, accounting for 25% of all bycatch. However, most bottom trawls used to catch hake are built to reduce bycatch. Furthermore, hake live in shallow, sandy bottom waters which are more resistant to habitat damage. The hake featured on tonight's menu was caught on small day boats, using hook-and-line. This method is highly selective, resulting in little bycatch and a limited number of higher quality of fish.

SPANISH MACKEREL CASSEROLE

with sauteed rainbow chard, milk poached garlic purée and pickled mustard seeds

5 slices whole wheat bread, crusts included
1 tablespoon canola oil
1 small onion, chopped
2 cups mushrooms, stemmed and chopped
1/4 cup all-purpose flour
3 cups milk
1 cup chicken broth or vegetable broth
3/4 teaspoon salt
1/4 teaspoon ground black pepper
1/2 pound fettuccine, broken into thirds, cooked and shocked
2 pounds mackerel, poached and chilled

1. Preheat oven to 425 degrees.
2. Place bread in food processor and pulse for 30 seconds into bread crumbs (makes 2 ½ - 3 cups).
3. Heat oil in large skillet over medium heat. Add onions and cook for 8 minutes until onions are soft.
4. Add mushrooms and cook, stirring, until the mushrooms release their water, 5 to 7 minutes.
5. Add flour and stir immediately and vigorously with a wooden spoon until flour is completely incorporated.
6. Add milk and broth. Stir to combine and bring mixture to a boil, stirring frequently. Reduce heat and cook, stirring, until liquid has thickened and reduced by about ½ a cup. Season to taste.
7. Combine cooked pasta, thickened broth, and poached mackerel, and toss to incorporate.
8. Pour into a 9 by 13 inch casserole dish and top with bread crumbs.
9. Bake for 25 minutes, or until crumbs are golden brown and toasted.

SPANISH MACKEREL

Scomberomorus maculatus

SPANISH MACKEREL are found along the Eastern coast of the United States, from New York down to the Gulf of Mexico. They mature quickly and reproduce in high numbers, making them resilient to high fishing pressure. Spanish mackerel are mostly caught using either gillnets or cast nets. Gillnetting uses a suspended, almost invisible net that fish swim right into. Cast nets are large nets that are set on large schools of fish. Both of these methods result in little bycatch and no habitat damage.

Mackerel is a great option as it is lower on the food chain and therefore requires less energy to survive than larger fish, such as tuna or swordfish. It is also rich in beneficial omega-3 fatty acids which can help lower high blood pressure, reduce the risk of cardiovascular disease, and prevent certain forms of cancer.

SMOKED SALMON ICE CREAM

with lemon-buttermilk cake

1 pound smoked salmon
1 quart heavy cream
1 quart half and half
24 egg yolks
14 oz sugar

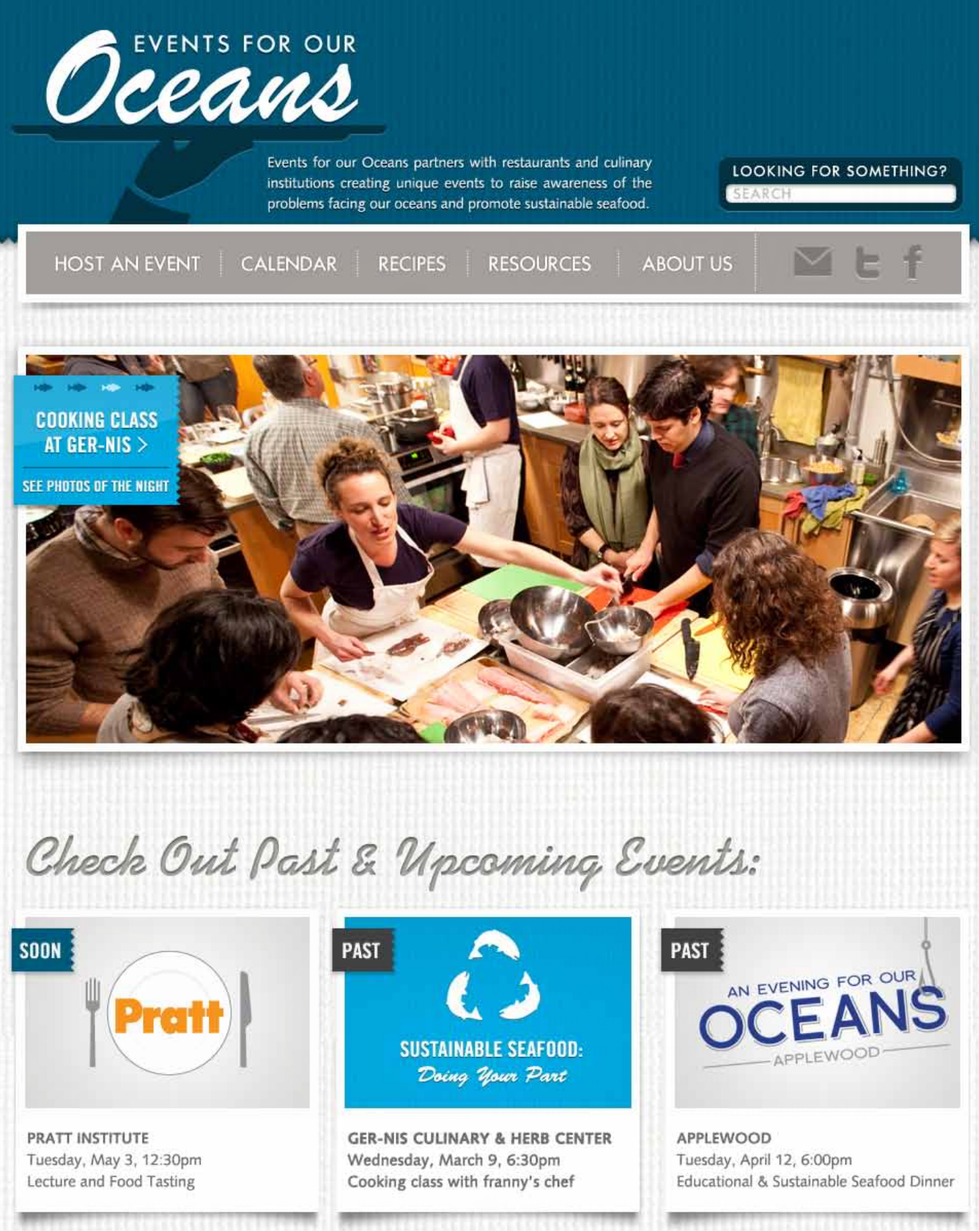
1. Scald cream and half and half together.
2. Remove from heat and add smoked salmon. Steep salmon in dairy mixture for at least 3 hours.
3. Remove salmon from the dairy mixture.
4. In another bowl, mix eggs and sugar together.
5. Add the smoked salmon cream mixture to the eggs and sugar and mix well.
6. In a heavy bottomed stock pot, heat the mixture over medium high heat. When the mixture appears thick, quickly remove from the heat and transfer into a new pot in an ice bath and chill.
7. Put the base in an ice cream machine and spin.

SOCKEYE SALMON

Oncorhynchus nerka

SOCKEYE SALMON is one of the five Alaskan salmon species. It has healthy populations due to a pristine freshwater habitat and excellent management. The majority of sockeye salmon are caught using gillnets or purse seining. These methods result in little bycatch and don't damage the seafloor.

After one or two years of living in freshwater, sockeye salmon migrate as far as 2,000 miles to the North Pacific or Artic Ocean. One to four years later, they return to the same freshwater source in which they were born to spawn and eventually die. Though sockeye salmon have a relatively low level of productivity, they lay large eggs which they protect by burying in the sand. Sockeye salmon are never farmed because they can't reproduce in controlled environments. There are several environmental concerns with farmed salmon. They depend on wild fish as a source of food which puts a significant amount of stress on already diminishing populations. Additionally, fish farms can pollute local ecosystems and spread disease to wild species of fish. Therefore, wild Alaskan salmon is a better option over farmed salmon.



THE NEXT STEP

One of the many things this project and these events have taught me is that people are interested in learning more about choosing sustainable fish. They care about the future of the oceans and are curious about what the responsible decisions are when it comes to buying or cooking seafood. People want to gain a better understanding of this information in an enjoyable, engaging and stimulating way.

An organization could partner with different restaurants, culinary institutions and other organizations to continue creating unique events to raise awareness of the problems facing our oceans and promote more sustainable seafood. This organization would be called Events for our Oceans. Each event would be tailored to highlight the strengths of each venue while aiming to educate participants on ocean issues and provide them with concrete ways in which they can help. This model can work for high-end restaurants or your average sushi spot, as well as culinary institutions, cooking schools and fish markets. Even businesses outside of the culinary field could be involved, including fishing operations, aquariums and museums, non-profit organizations and snorkeling or scuba diving companies.

I have also learned that the success of any project is dependent on great design. It is what first catches a spectators' eye and what maintains their interest. It can be used as an educational tool or as a reference to use at a later date. Therefore, each event would be designed and co-branded to incorporate the look and feel of the restaurant, business or organization hosting the event and also speak specifically to the type of function. The materials produced for the event and to be handed out after would strive to visually convey messages clearly, simply and beautifully. They would serve as a tool to educate participants and give them the resources to make more educated decisions in the future.

This thesis project has shown me how my decisions can impact our oceans and as a result, I have made changes to those choices I make. It has encouraged me to seek out ways in which I can become a more conscientious seafood eater. I hope these events did the same for others. The future of our oceans may depend on it.

10 THINGS YOU CAN DO AS A CONSUMER TO BENEFIT OUR OCEANS

1. Eat smaller fish like anchovies, sardines or mackerel. They are lower on the food chain and require less energy to reproduce than larger fish.

2. Learn to love shellfish, such as clams, mussels, scallops and oysters. They are caught or raised using methods that result in little impact on the environment.

3. Avoid trawl-caught and non-U.S. farm-raised shrimp. Shrimp trawling damages the seafloor and has high rates of bycatch. Shrimp farms generate large amounts of pollution and are responsible for the deforestation of mangroves.

4. Farmed fish isn't always bad, especially in the U.S. Some great choices include striped bass, rainbow trout, Arctic char, and U.S. farmed barramundi, catfish, cobia, and tilapia. Most are farmed in closed systems so there is a low risk of pollution or habitat destruction.

5. Eat wild Alaskan salmon over farmed salmon. The fishery is well managed and they are caught in ways that cause little habitat damage and low levels of bycatch.

6. Avoid species like Bluefin tuna, orange roughy, Chilean seabass, caviar, Atlantic cod, eel, grouper and Atlantic halibut. They are incredibly overfished.

7. If you're going to buy canned tuna, buy Wild Planet or American albacore tuna. They are troll/pole caught which result in little or no bycatch.

8. Use the following sites for delicious and sustainable seafood recipes: Monterey Bay Aquarium, Ocean Friendly Chefs, Marine Stewardship Council, and National Resources Defense Council.

9. Learn more about these issues. There are great books about problems with the fishing industry, such as Four Fish, The Empty Ocean or The End of the Line, which was also made into a movie available on your Netflix Instant Queue.

10. When in doubt, consult your Blue Ocean Institute or Monterey Bay Aquarium Sustainable Seafood Guide. They both have free iPhone apps you can download.

THANK YOU

I could not have accomplished this project without the help of many, many people.

I want to start by thanking Alex Liebergesell, my thesis advisor, and classmates Stephanie, Michael, Fernanda, Yuan Yuan, Jessica and Yi-Chen for their helpful feedback and positive encouragement throughout this project.

My research team consisted of Kate McLaughlin of Blue Ocean Institute and one of my best friends, Brian Hutchinson, of Conservation International. These two are improving the status of our oceans on a daily basis. I can only hope to one day have the impact that you two have.

There would be no "Events for our Oceans" without help from the people who made these events happen. Tina DeGraff and Nissa Pierson of Ger-Nis, and Chef David and Laura Shea of applewood took a huge chance hosting these events and I'm grateful that they did. I commend you for helping educate people on these important issues of sustainability.

While I've heard many people say this, I have the best friends and family in the world. Thank you so much for brainstorming with me, spreading the word, spending money you don't have to support me, driving long distances in the middle of the week and being patient with me.

As you read through this book, I'm sure you've noticed the amazing photographs taken at both sustainable seafood events. For that, I owe an enormous thank you to my good friend and colleague, Mo Scarpelli. She generously donated her time and talents to help me make this book beautiful. Check out her photos at maureenscarpelli.com.

It's not everyday you get to work with your best friend. It's as great as it sounds. John, I can't thank you enough for the countless hours and muffins you put in to help me pull this off. You are an inspiration to me and I can't wait to eat at each and every one of your restaurants as you revolutionize the culinary world. Tamar, your help, insight and encouragement with this project has been invaluable.

Lastly, but most importantly, I must thank my brilliant and beautiful wife, Jamie. She's helped me formulate my thoughts, caught all my typos, and listened to me rehearse my presentations over and over. She's been extremely patient as I've been spending more time with my computer than with her, come home from work grumpier than Jack Lemmon and Walter Matthau combined, and have turned our apartment into my personal, chaotic workspace. You push me to be a better person and I love you.

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ORGANIZATIONS/WEBSITES

Applewood (www.applewoodny.com)

Blue Moon Fish (http://www.bluemoonfish.com)

Blue Ocean Institute(www.blueocean.org)

CleanFish (www.cleanfish.com)

Food and Agriculture Organization (www.fao.org)

franny's (www.frannysbrooklyn.com)

Ger-Nis Culinary Herb Center (ger-nis.com/culinaryherbcenter)

Heritage Foods (www.heritagefoodsusa.com)

I Love Blue Seafood (www.ilovebluesea.com)

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Approximately 70% of the Earth is covered by ocean. Less than 1% of that is protected from fishing. As a result, our oceans are overfished, animal populations are threatened and marine ecosystems are destroyed. As consumers, we have the power to influence change and it is our duty to drive the market in a more responsible direction. If we care about the future of our oceans, we must start doing better jobs as consumers.

This thesis project has showed me how certain decisions that I make can impact the health of our oceans. It has encouraged me to seek out ways in which I can become a more mindful seafood eater. I hope it does the same for you. The future of our oceans may depend on it.

EVENTS FOR OUR

Oceans

Thesis Project by Greg Yagoda