Improving the Sustainability of Fish Served at Whitman’s

The Zilka Center recognizes that understanding sustainability is only half of the battle when it comes to sustainable dining. “Educational solutions to the sustainability crisis are vital, but not enough. Bringing together food and education means practicing a new approach to food production, processing and consumption, at both an individual level and in the redesign of our food service systems. We cannot responsibly help our students learn how to change the industrial food practices of our country without striving to make those changes ourselves.” The fish served at Whitman’s makes an excellent opportunity for dining services to highlight its forward thinking, thus effecting good change toward impactful sustainability.

Fish has become an increasingly popular protein choice because of its many health benefits. It is lean protein with little fat; the fats it does contain are heart healthy fatty acids, and it also has many amino acids. However, our fish supplies are limited. As people turn to fish as a healthy option, we have to ask ourselves, is fish a sustainable option? At the present rate the world is eating fish, we are slowly depleting the ocean’s natural resources. We need a fuller understanding of the ramifications of our increased consumption of eating fish; specifically what kinds of fish are most at risk for depletion given present habits, how this will affect the overall natural resources for fish, and how we can change habits to become more sustainable. One step every student at Williams can take is to push for more sustainability of fish being served in the dining halls and then
support the choices dining services makes to improve sustainability.

Overall, we can think of defining sustainable fish as meaning, “the product you are buying has been caught in a manner that ensures the long-term viability of our environment and our oceans”, as stated by a sustainable fish distributor, High Liner Foods Inc. Because fish need to live in an aquatic habitat, which is not universally prevalent, transportation to its final destination becomes a more grey area in defining sustainability of fish. In addition to considering sustainability as an overall picture the Monterey Bay Aquarium is spearheading a Seafood Watch Program. This program defines most popular fish into three categories, best choice, defined as “abundant, well-managed and caught or farmed in environmentally sound ways”, good alternative, and avoid, defined as “over fished or caught or farmed in ways that harm other marine life or the environment”, based on which region of the country you are in. In addition to this hand guide, the Marine Stewardship Council also certifies all eco-friendly and sustainable fish to help consumers choose with regards to sustainability.

There are two kinds of fish production: wild caught or farmed raised. Wild caught can either be line caught, long line caught, or caught by trawling. The benefits of wild caught are that the fish have developed in their natural habitats and have not been force fed any hormones or fish feed. The drawbacks to wild caught fish are the possibility of over fishing and depleting the natural resource of that specific fish, illegal fishing and not recording the fish that are caught, habitat damage, and bycatch. Habitat damage comes mainly from trawling in which the nets destroy the sea floor bottom, especially coral reefs. Bycatch is when unwanted fish or marine life get caught in a net and are therefore sacrificed.
Because of problems with overfishing coupled with the significant increase in demand for fish, farm raised fish and aquaculture have become more popular. There are two main ways in which one can raise fish: in a land-locked pen, or in a pen located in the ocean or another body of water. The benefit of aquaculture is having more control over the number of fish produced and it extinguishes the worry of depletion of a resource. However, there are many drawbacks to aquaculture as well, like pollution and disease, and the worry of hormones found in farm raised fish. In aquaculture many fish are living in a very small space, thus they are living among much uneaten food and feces, an unavoidable breeding ground for pollution and disease. Additionally, in order to promote tolerance to pollution and disease, fish are fed antibiotics and hormones that many people are concerned about ingesting in a second hand way.

Williams dining services gets all of their fish from three distributors, Ginsberg’s Foods of Hudson N.Y., Masse’s Seafood, and Wohrle’s Food Inc. Ginsberg’s is Williams’ main supplier for dining services. Ginsberg’s uses a combination of vendors for their fish, including Stavis Seafood, Nagle Seafood, Channel Fish Company, and Mariners Fish Company. Stavis, Nagle, and Channel Fish are based in Boston, MA while Mariners is based in New Bedford, MA.

Mainly Whitman’s dining hall buys and serves salmon, cod, haddock and uses tuna and a shrimp and scallop mix for the salad bar and pasta sauces. Most expensive are salmon, cod and haddock spending (as of March, 2011) $12,021, $3,591 and $1,627 respectively. As of March 2011 Whitman’s has spent $655,555 on food expenses with $23,573.67 on seafood alone. This accounts for 3.60% of total food spending, not a significant chunk of total spending, which can be a positive when considering increasing
the sustainability of fish served in Whitman’s. An improvement in sustainability will most likely come at a monetary cost, however because fish is a small portion of total spending, the increase in cost would not be a large increase when considering total spending. Thus sustainability could be viewed as not significantly damaging to Whitman’s overall budget, while presenting an impactful dining services statement.

After talking to Ginsberg’s, I have concluded that the salmon dining services receives is normally about 80% North Atlantic farm raised salmon. These salmon are farmed in pens that are actually located in the ocean, trying to induce a more natural habitat while keeping wild fish out. The other 20% of the salmon being served in Whitman’s is Norwegian or Scottish farm raised salmon. The North Atlantic salmon is trucked to Boston, picked up by suppliers and trucked to Ginsberg’s, then ultimately trucked to its final destination at Williams. The Norwegian salmon is typically shipped commercially to Miami, then to Boston, then picked up and trucked to Ginsberg’s plant before finally being trucked to Williams. I believe Williams receives both fresh and frozen fish.

According to the Seafood Watch Program, Atlantic farmed seafood is on the avoid list. Unfortunately, this is the salmon most served by our dining services. The only sustainable choice for salmon is Alaskan Wild. I believe it would be of great concern to many students at Williams if they knew that Whitman’s is spending the majority of their seafood costs, 51%, on unsustainable salmon.

According to Fred Ackley, chef at Whitman’s, salmon is by far the most popular fish choice by students in the dining hall. Therefore, it is the high demand that is keeping Whitman’s supplying salmon. 39% of the total fish budget ($5,838 of $15,801
total seafood) was spent on salmon last year. Interestingly, while the percent spent on fish to the total spent on food decreased this year, (4.16% in 2009-2010 to 3.60% in 2010-2011), salmon purchases significantly increased to 51% ($12,021 of $23,573.67).

In addition to the Seafood Watch Program ratings of sustainability, we must also consider the carbon footprint of fish in this puzzle. While carbon emissions for airfreight are 3.7 times that for truck transportation, we must also consider the carbon impact of producing salmon. For wild salmon, the carbon footprint is basically transportation costs with a variable in carbon emissions reliant on abundance.

However, it’s a different story for farm-raised salmon. Because salmon are carnivores, it actually requires more carbon to raise them than to transport them. The carbon emissions are a variable of fish feed. Salmon need the protein in fish feed which primarily comes from fishmeal; thus salmon actually require carbon emission to grow. The carbon emissions of farming salmon is dependent on the amount of fishmeal in the feed versus fish feed containing more plant based protein, which has lower emissions. Norwegian salmon are fed more plant based feed, so it has been calculated that Norwegian farm raised salmon takes 1.8 pounds of carbon dioxide to harvest 1 pound of fish. Wild caught salmon take 1.9 pounds of carbon dioxide (from trolling) to produce 1 pound of fish. Atlantic farm raised salmon have the highest carbon emissions per pound of fish at 2.5 pounds\(^1\).

Factoring in that air travel has a much higher carbon emission footprint than trucking, while the production of Atlantic farm raised salmon has the highest carbon emissions, serving it at Whitman’s still would have the lowest overall carbon footprint.

Whitman’s spends the majority of their remaining fish costs, (24%), on cod and haddock, (17% from cod and 7% from haddock). Both Ginsberg’s cod and haddock are a combination North Atlantic long-line caught and North Atlantic farm raised. Ginsberg’s in unsure of the breakdown of long-line caught versus farm raised. Both types of fish are trucked from Boston to Ginsberg’s and then to Williams. Both farm raised and line caught cod and haddock are listed as best choices or good alternatives according to the Seafood Watch Program.

The carbon footprint for both these fish is significantly lower than that of the salmon being served. First of all, both cod and haddock are omnivores, so for the farm raised fish they do not require fish feed that contains fishmeal, and thus do not require much carbon emissions to produce. One may infer that the carbon emissions are pretty equal when comparing farm raised cod or haddock and line caught cod and haddock. Further, because both farm raised and line caught cod and haddock are being caught on the Atlantic coast, it does not require air travel, only trucking for means of transportation.

When talking to Fred Ackley, it was clear that dining services considers sustainability when choosing menus and ordering fish. For example, Whitman’s only serves fish every two weeks, the recommended amount for sustainability in the fishing industries. They also are conscious of the Seafood Watch Program and do try to serve sustainable fish while balancing the student’s preferences. Additionally, they try to reuse some of the packaging that the fish is delivered in, like plastic buckets, for storage of
other materials. However, I believe there are many simple things Williams and specifically Whitman’s could do to increase the sustainability of fish they are serving.

My first suggestion to dining services in hopes of increasing the sustainability of the fish they serve is better educating the students about the long-term effects on the environment of eating fish, especially certain fish. While student preferences are for salmon, I think if the students knew the long-term effects of eating so much farm raised Atlantic salmon, they would reconsider choosing it. An example of how education can change people’s actions is through the education of the negative consequences of eating Chilean Sea Bass. Although it is a delicious fish, many students have come to understand and accept the immediate short term pleasure of eating this fish cannot come close to justifying the long term effects of endangerment to the species. I feel that if the students had a better understanding of the long-term consequences of eating Atlantic salmon, it would help them to make more sustainable choices. Appealing to the students’ sense of accountability to the world and desire to improve is the best way to lower the salmon intake at Whitmans.

Hopefully education and accountability would make students want to choose to not eat as much salmon. However, if not, an easy way to make this suggestion more “forceful” would be to limit the amount of salmon purchased and served and fill the void with more sustainable choices. It is most likely not feasible to eliminate salmon completely from the menus, however there is a lot of room to serve it in a more sustainable way. Based on sustainability of salmon varieties and considering carbon footprint, the more sustainable choice of salmon is Alaskan wild caught, which should become part of dining services fish menus. Because it is more expensive, Whitman’s
could try to serve it only a few times a year, buying large fillets and pre-portion by hand, allowing them to cut smaller portions, thus reducing the overall price per portion.

Another idea is to fill in the former ‘salmon’ days with a more sustainable and cheaper fish such as farm-raised tilapia. While the students may not prefer it as well, it is a more sustainable and economical choice. I believe that having Whitman’s slightly modify their service of salmon alone would greatly increase the overall sustainability of fish served.

Additionally, I think there are several things dining services could do to help the students recognize their efforts in serving sustainable fish by possibly having signs about where the fish they are eating is coming from. This would increase the traceability of the fish served and will give students a feeling of greater accountability about eating fish with a higher carbon footprint. It is very sobering to see a sign saying something you are eating is coming from Norway and considering how much effort and carbon emissions it took to get that little piece of salmon onto your plate.

Lastly, I would recommend dining services to consider either partnering with the Monterey Bay Aquarium Seafood Watch Program or the Marine Stewardship Council, or switching to seafood distributors that specialize in sustainability. The benefits of a partnership with a seafood watch program would ensure that all of the seafood that is being served is either a best choice or good alternative. When you have a partnership you are not tempted by other factors like price to occasionally serve unsustainable fish.

Switching to distributors specializing in sustainability such as High Liner Foods or Icelandic would give William’s the benefit of serving only sustainable or MSC certified fish. Further, these distributors also are conscious of sustainability in efforts greater than fish such as product waste, energy consumption, and packaging.
Overall, I think dining services and Whitman’s specifically are doing a fine job of serving sustainable fish, however there are many small and very feasible changes they could be making in order to make the fish they are serving significantly more sustainable.

Sources


