GREEN LIVING: EATING RIGHT

Sustainable Seafood

All Fish Dishes Are Not Created Equal

by Erica Gies

Americans are putting more of the other-other white meat—fish—on the table than ever before. The average person eats 15 pounds per year, contributing to a $46 billion consumer seafood market, according to Seafood Choices Alliance. That's probably good news for a country grappling with growing rates of obesity and heart disease.

But like everything we do *en masse*, eating fish has complex environmental consequences. Now, several organizations help consumers isolate a range of tasty, sustainable options. Perhaps the best thing consumers can do is ask their local fishmonger or restaurant the all-important question: Where did this come from?

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Dead on Arrival

The United Nations Food and Agriculture Organization reports that 27 million tons of "bycatch"—living things caught in nets unintentionally—die each year. That's 25 percent of all fish caught. Reasons for tossing catch back (usually dead) vary, but they include a lack of market value or an absence of relevant permits. Some fishing methods engender little bycatch, whereas others, like trawling for shrimp, kill up to 10 pounds of fish per pound of shrimp.

Consumers are slowly realizing that the oceans are not a limitless source of food (see "Saving the Seas," cover story, July/August 2005). Even with adapted military technologies such as sonar-mapping, heat and depth sensors, and satellite imagery, the annual fish harvest reached a peak of approximately 82 million metric tons per year in 1989, says the Monterey Bay Aquarium. Deep-sea creatures such as orange roughy and Chilean sea bass have slower life cycles than those in the shallows, and have proven especially vulnerable to overfishing.

Some fishing methods exact a heavy toll on oceanic ecology. The rather crude form known as bottom harvesting rips out coral, rocks and plants, destroying habitat for scallops, cod, tubeworms, Pacific rockfish, sole and halibut. Longlining, hook-and-line fishing, and trap fishing are much gentler on the sea bottom.

Farmed Fish

Given these obstacles, the answer must be fish farming, right? Well, yes and no. Aquaculture holds much promise, and provides one out of three fish eaten in the world today. However, aquaculture methods—and their environmental impacts—vary dramatically depending on the species.

Fish raised in contained systems on land, including tilapia and catfish, are among the best environmental choices because their pollution doesn't enter sensitive marine environments. Farmed shellfish, such as clams, mussels and oysters, are also sustainable; in fact, shellfish are filter feeders that leave the water cleaner than they found it.

U.S. farmed shrimp must adhere to environmental laws and is cautiously accepted by the watchdog groups. However, shrimp farmed elsewhere often means mangrove forests (which are nursery habitat for many creatures) have been cut down and coastal waters polluted.

Many people think farmed salmon is the way to get their omega-3 fatty acids without jeopardizing endangered wild salmon. However, the wild salmon fishery in Alaska is healthy, and that's the best choice for salmon. Farmed salmon enterprises are among the most detrimental denizens of aquaculture. Salmon are farmed in net pens near coasts and currently depend on surrounding water to dilute waste, uneaten food and antibiotics.

"1?"=}´gle farm with 200,000 salmon can produce as much waste as a city with 62,000 people," says Joey

Brookhart, communications associate for Seafood Choices Alliance. “And all of that is untreated and discharged directly into surrounding water.”

When the fish escape, parasites and diseases can be transmitted to wild salmon. “Every year, hundreds of thousands, if not millions escape from pens,” says Brookhart. “From one pen off Scotland in 2004, 600,000 escaped during a storm.”

Salmon are also carnivorous. Farming them requires wild fish for food, which is a wasteful loss of protein. Additionally, the way farmers feed them reduces their food value. A 2004 study published in *Science* sampled wild and farmed salmon from hundreds of market locations and found the farmed salmon had up to 10 times higher levels of PCBs and dioxins than wild samples. Brookhart says contaminants become concentrated when fish is ground up into fish meal for salmon.

Health Risks

Contaminants in water can aggregate in fish and pass on pollutants such as mercury, PCBs, dioxins and DDT to their consumers. Mercury bio-accumulates at the top of the food chain, so large, older fish such as tuna and mackerel are particularly dangerous. Fish that live in the bottom sediments of rivers and estuaries where organic chemicals get suspended, such as wild striped bass, are particularly susceptible to the latter pollutants.

People who want to know the source of their fish without a shadow of a doubt might opt to catch it themselves. Craig Springer, a fishery biologist with the U.S. Fish and Wildlife Service, says enforcement to make sure anglers aren’t taking home at-risk or unsafe-to-eat species varies from state to state.

Unfortunately, irresponsible recreational anglers can cause environmental damage, emulating the devastation of commercial fishing on a small scale. “If monofilament line is left on shore, birds and animals get tangled in it,” Springer says. “If anglers are concentrated on a stream, they can trample the banks and cause erosion and an increase in water temperatures by reducing shade.”

Shopping Knowledgeably

Luckily, conscientious seafood consumption is getting easier. In response to the 9/11 terrorist attacks, Congress passed a labeling law about food sources. Lobbyists stymied it—except for seafood. The law took effect last April, and at large retailers, packages now must state a fish’s country of origin and whether it was wild or farm-raised. Although restaurants aren’t required to provide this information on menus, suppliers must track it, so restaurants should know when asked.

Brookhart says, “Everyone might not walk around with a seafood card in their wallet, but there are a lot of great choices out there and a lot with significant impacts on the environment. So maybe it’s a matter of memorizing the three choices that are always going to be good, or the three that are a clear and significant impact on the ocean.”

For U.S. consumers, Brookhart recommends wild salmon from Alaska, farmed catfish from the U.S., and all farmed mussels, clams and oysters as reliably good choices. On the “just say no” short list are farm-raised salmon, bluefin tuna and shark. An eco-minded fish lover who commits this little cheat sheet to memory won’t be left stranded between the devil and the deep blue sea.

Shauna Dineen contributed research to this story.

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