THE
BLUE OCEAN INSTITUTE

Guide to Ocean Friendly SEAFOOD

Updated January 2007

Farmed Clams, Mussels, and Oysters
Shellfish filter feed and don't require fishmeal or fish oil for food. When farmed using suspended bags, nets, or cages—as opposed to being dredged—mollusks top our list. Blue Mussels* and American (Eastern) Oysters* have consumption advisories.

Mackerels
Mackerels grow fast and produce many young, qualities that have enabled Atlantic, King, and Spanish Mackerels to rebound recently from depletion. Today, Atlantic, Cero, King*, and Spanish* Mackerels are at healthy levels of abundance. Most mackerel fishers use hook-and-line and net gears, with little bycatch. But marine mammal catches remain a problem in the mid-water trawl fishery that catches Atlantic Mackerel.

Tilapia, U.S.-farmed
Tilapia are freshwater fish that require little fishmeal and fish oil in their feed. Most U.S. tilapia farms use self-contained recirculating systems, producing less pollution compared to most foreign tilapia farms. Tilapia are not native to the U.S., and escapes that do occur adversely affect freshwater fish populations.

Alaska Salmon
With good management and fairly healthy habitat, Alaska salmon remain abundant. There are concerns, however, that hatchery-raised fish can adversely affect wild salmon populations through competition and genetic dilution.

Mahimahi, pole- and troll-caught
Mahimahi grow fast, live short lives, and withstand high fishing pressure. Pole and troll fisheries catch Mahimahi with little bycatch compared to longline fisheries.

Albacore, Bigeye, Yellowfin, and Skipjack Tuna, pole- and troll-caught
Tunas are fast-growing, prolific breeders, and wide-ranging, but many populations are depleted. The low bycatch associated with pole- and troll-caught tuna makes them better alternatives to longline- or purse-seine-caught tuna.

American ("Maine") Lobster, Maine and Canada
Maine and Canadian lobster populations today thrive at high abundances. However, North Atlantic Right Whales, an endangered species, still become entangled in lobster fishing gear, a problem that remains a concern.

Sablefish (Black Cod)
Long-lived, Sablefish recently recovered from being overfished. Fishers mostly use bottom longlines to catch Sablefish. They own shares of the annual catch, a management system superior to the former derby-style of fishing. Widespread adoption of better fishing practices successfully reduced bycatch, particularly benefiting the Short-Tailed Albatross.

Squid
Squid typically reproduce before turning one year old and they live short lives, characteristics that help them withstand high fishing pressure. The difficulty of managing squid fisheries lies in their sensitivity to changes in environmental conditions that affect their abundance.

Pacific Soles
Well-managed, these flatfish remain abundant. However, bycatch and habitat damage from bottom trawling cause concern. Fishery managers try to minimize these impacts, especially where soles share habitat with depleted Pacific Coast rockfish.

Dungeness*, King, and Stone Crabs
These crab species are fairly abundant thanks to wise management. High fertility helps Dungeness and Stone Crabs withstand fishing pressure. King Crabs brood their eggs for a year, making them vulnerable to fishing pressure. Crab fishers use relatively low-bycatch traps (or pots).

Catfish, U.S.-farmed
Fish farmers raise catfish in the southern U.S. in large earthen ponds, resulting in some water pollution. But escapes are rare, and catfish require much less fishmeal and fish oil in their feed than other farmed fish.

Shrimp, U.S.-farmed
Farmed shrimp require high amounts of fishmeal and fish oil in their food compared to other farmed fish and shellfish. Farmers usually treat discharged water to reduce pollution. U.S. farm-raised shrimp are a better choice than either imported farm-raised shrimp or trawl-caught shrimp, which have serious environmental costs.

Pacific Cod
Faring much better than their Atlantic counterparts, Pacific Cod are at a healthy level of abundance. Managers limit catches and account for bycatch. Unintended catches of albatrosses declined with the widespread adoption of seabird avoidance measures in the fishery. But declines of Steller Sea Lions raise concerns about this fishery's ecosystem impacts.

Pacific Halibut
Although they grow slowly and can live over 50 years, Pacific Halibut remain abundant due to responsible management. Fishers own shares of the total annual catch, eliminating the dangerous incentive to fish competitively. This fishery's recent adoption of strategies to avoid accidentally catching seabirds will likely reduce impacts on their populations.

Rainbow Trout
Some problems with farming this species exist. Feed for Rainbow Trout contains large amounts of fishmeal and fish oil. Most U.S. Rainbow Trout farmers use freshwater flow-through systems (called raceways), which spread pollution. Rainbow Trout are native to the Pacific Northwest where the majority of U.S. farms are located.

Swordfish
Swordfish in the North Atlantic are showing signs of recovery following stronger catch regulations. Their abundance appears healthy in the North Pacific, but their status is unclear in other parts of the Pacific. Most Swordfish are longline-caught, with high bycatch of albatrosses, sea turtles, and sharks.

FISH KEY

- Species is relatively abundant, and fishing/farming methods cause little damage to habitat and other wildlife.
- Some problems exist with this species' status or catch/farming methods, or information is insufficient for evaluating.
- Species has a combination of problems such as overfishing, high bycatch, and poor management, or farming methods have serious environmental impacts.
- A fishery targeting this species has been certified as sustainable and well-managed. Learn more at www.msc.org
- *One or more consumption advisories exist from state agencies, the U.S. Food and Drug Administration, and the Environmental Protection Agency; or, consumption concerns are highlighted in scientific studies. Visit www.blueocean.org/seafood for more information.*

MSC10289

Blue*, Snow, and Tanner Crabs
Exploited heavily, depletion affects some populations of these crab species. Blue Crabs suffer from habitat loss and pollution problems. Certain biological traits in Snow Crabs—like egg-brooding for almost a year—make them particularly vulnerable to fishing pressure. Snow and Tanner Crabs spend most of the year in groups on the seafloor, which makes them easier to catch. Fishers catch crabs mostly with low-bycatch traps.

Albacore, Bigeye, Yellowfin, and Skipjack Tuna, canned or longline-caught
Despite having naturally high fertility and wide ranges, many Albacore Tuna ("chunk white") and Bigeye, Yellowfin, and Skipjack Tuna ("chunk light") populations are declining from heavy fishing pressure. Globally, few regulations exist for tuna longline and purse-seine fisheries. These fisheries also catch large numbers of marine mammals, sea turtles, sharks, and young tunas. Despite U.S. "Dolphin Safe" standards for the canned tuna market, affected dolphins are not recovering.

Monkfish
Monkfish are typically caught along with other groundfish such as Atlantic Cod and Haddock in the Northeast U.S. This fishery suffers from historically poor management, resulting in overfishing, depletion, and job losses. Gillnets and trawls, which cause high bycatch, catch the majority of Monkfish in the U.S. market.

Sea Scallops
While no longer overfished, controversial management measures for wild Sea Scallops currently allow too high fishing pressure. Bottom dredges and trawls used to catch Sea Scallops damage habitat, and there is unintended catch of endangered sea turtles, depleted Atlantic Cod, and other groundfish.

Atlantic Flounders and Soles
Long-term overfishing and high bycatch plague Atlantic groundfish fisheries. Naturally vulnerable to fishing pressure, most Atlantic flounders and soles remain depleted. Summer Flounder*, an exception, is rebounding but high fishing pressure threatens its continued recovery.

Groupers
Generally long-lived, many groupers change sex with age and spawn together in the same places every year, making them vulnerable to overfishing. Most groupers sold in the U.S. come from the Gulf of Mexico, where management of grouper fisheries has historically been lacking. In U.S. waters, Snowy, Red, Warsaw, Black, Goliath, and Nassau Groupers are overfished.

Orange Roughy
Severely depleted, Orange Roughy don't mature until they're at least 20 years old and can live over 100 years. They live in deep waters where habitat-damaging trawls catch them when they gather in groups to feed or spawn. Fishing for Orange Roughy also catches and kills a number of threatened deep-sea shark species.

Chilean Sea Bass
Really named Patagonian Toothfish, high market demand for this naturally long-lived fish drives depletion and creates an incentive for continued illegal fishing. One very small Patagonian Toothfish fishery in the South Atlantic is being sustainably managed.

Atlantic Bluefin Tuna ("toro")
Highly valued by sushi connoisseurs, Atlantic Bluefin Tuna have been exploited heavily since the 1970s and suffer extreme depletion. Fishers use poles and lines, harpoons, traps, longlines, and purse-seine nets to catch this valuable species. Since 1996, the World Conservation Union has listed the western population of Atlantic Bluefin Tuna as critically endangered and the eastern population as endangered.

Atlantic Halibut
Fishers use bottom trawls and longlines to catch Atlantic Halibut. Long-lived and slow to mature, this fish is naturally vulnerable to fishing pressure. Like Atlantic Cod, Atlantic Halibut in U.S. and Canadian waters crashed in the 1980s from overfishing and remain extremely depleted today.

Atlantic Cod
Decades of overfishing drove Atlantic Cod populations to historic low levels. Even with heavy management, populations show no sign of rebuilding. Bottom trawling for Atlantic Cod destroys habitat.

Sharks
Sharks grow slowly, have few young, and are victims of widespread overfishing and bycatch. Despite laws in some countries (including the U.S.) against killing sharks just for their fins, demand for shark-fin soup in Asia drives heavy and sometimes illegal fishing worldwide. Sharks swim past national boundaries, yet no international management exists.

Shrimp, imported
Bottom trawls used to catch most wild shrimp damage habitat and unintentionally kill many unwanted invertebrates, fish, and sea turtles. Coastal shrimp farming ruins life-supporting ecosystems such as mangroves and causes water pollution. Shrimp fisheries in the U.S. are generally better monitored and regulated.

Farmed Salmon
High environmental costs of farming salmon include water pollution, spread of diseases to wild fish populations, high content of wild fish in feed, and overuse of antibiotics. In addition to Atlantic Salmon, farmers are now raising Chinook and Coho Salmon. Wild Atlantic Salmon in the U.S. are endangered. Farms supply all the Atlantic Salmon sold in the U.S.

Caviar, from wild-caught sturgeons
Wild sturgeons suffer from overfishing and habitat degradation. They mature late, and management efforts are generally poor. High demand for beluga, osetra, and sevruga caviar from the Caspian Sea drives overfishing and black-market trade. Caviar from farm-raised sturgeon is a good alternative.

Join our mailing list to receive our next seafood guide.
More information on these and other fish can be found at www.blueocean.org/seafood

Blue Ocean's Seafood Guide is brought to you in partnership with

patagonia

Oceans as WILDERNESS

For more information on Patagonia's Oceans as Wilderness Campaign, please visit their website at www.patagonia.com

(FOLD GUIDE & KEEP IN YOUR WALLET)

BLUE OCEAN INSTITUTE

Fresh Inspiration for Ocean Conservation

250 Lawrence Hill Road, Cold Spring Harbor, NY 11724
Toll-free Tel: 877-BOI-SEAS E-mail: seafood@blueocean.org

www.blueocean.org

Blue Ocean Institute works to inspire a closer relationship with the sea through science, art, and literature. We develop conservation solutions that are compassionate to people as well as to ocean wildlife, and we share reliable information that enlightens personal choices, instills hope, and helps restore living abundance in the ocean.