






To fit in your wallet, print the first page of this guide, then flip the sheet of paper over to print the second page on the back. Cut along the dotted lines, fold according to the directions on the MiniGuide, and stick in your wallet.

 **Atlantic Cod**
Decades of overfishing have driven these cod populations to historic low levels. Even with heavy management, populations show no sign of rebuilding. Catch methods for cod—primarily bottom trawling—cause substantial degradation.

 **Snappers**
Snappers, of which there are many species throughout the world, grow slowly and have long lifespans, making them vulnerable to overfishing. Much remains unknown about snapper fisheries because management is poor to nonexistent. Clear signs indicate that many snapper species are declining.

 **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 from the U.S. are generally better monitored and regulated. For more information on shrimp, check out our website.

 **Farmed (Atlantic) Salmon**
High environmental costs of farming salmon include water pollution, spread of diseases to wild populations, high content of wild fish in feed, and overuse of antibiotics. Wild Atlantic Salmon in the U.S. are endangered. All Atlantic Salmon sold in the U.S. is farmed.

 **Sharks, imported**
Many shark species are depleted worldwide. Slow growth and low birth rates, combined with poor management, have made shark populations victims of widespread overfishing and bycatch. Sharks swim past national boundaries, yet no international management exists.

This MiniGuide includes commonly available seafoods in U.S. markets. More information on these and other fish can be found at www.blueocean.org

This Seafood MiniGuide is brought to you in partnership with



BLUE OCEAN INSTITUTE

Fresh Inspiration for Ocean Conservation

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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.


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MiniGuide to Ocean Friendly SEAFOOD

BLUE OCEAN INSTITUTE

Fresh Inspiration for Ocean Conservation

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 **Farmed Clams, Mussels, Oysters, and Bay Scallops**
Shellfish are filter feeders and don't require fishmeal and fish oil for food. When farmed using suspended bags, nets, or cages—as opposed to being dredged—mollusks are a top choice.


 **Alaska Salmon**
With good management and fairly healthy habitat, Alaska salmon remain abundant. There are concerns that hatchery programs have adverse effects on wild salmon populations.

 **Striped Bass, wild and farmed**
Striped Bass are wild-caught and also farmed. Effective fisheries management helped wild Striped Bass recover from severe depletion in the 1980s to high abundance today. Farming hybrid Striped Bass results in few escapes and minimal pollution. However, their feed contains high levels of fishmeal and fish oil.

 **Mahimahi, pole- and troll-caught**
Mahimahi are fast-growing, short-lived, and can potentially withstand high fishing pressure. Pole and troll fisheries have little bycatch compared to other fisheries.


 **Bigeye, Albacore, and Yellowfin Tuna, pole- and troll-caught**
Tunas are fast-growing, prolific breeders, and wide-ranging. There is little bycatch with pole- and troll-caught tuna, making them better alternatives to longline- or purse-seine-caught tuna.


 **American ("Maine") Lobster, Maine and Canada**
Maine and Canadian lobster populations today are at record-high abundance. However, North Atlantic Right Whales, an endangered species, still become entangled in lobster fishing gear, a problem that raises significant concerns.


 **Squid**
Squid often reproduce before they are a year old and are short-lived, characteristics that help them withstand high fishing pressure. Their sensitivity to changes in environmental conditions often makes management of squid fisheries difficult.

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.

 One or more consumption advisories exist from state agencies, the U.S. Food and Drug Administration, and/or the Environmental Protection Agency. For more information, go to the EPA National Listing of Fish Advisories website: <http://www.epa.gov/waterscience/fish/>

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BLUE OCEAN INSTITUTE MiniGuide to Ocean Friendly Seafood



Pacific Soles

Well-managed, these flatfish are currently abundant. Bycatch and habitat damage from bottom trawling cause concern. However, fishery managers have taken some steps to minimize these impacts, especially where soles share habitat with depleted Pacific coast rockfish.



Catfish, U.S.-farmed

Fish farmers raise catfish mostly in the southern U.S. in large earthen ponds, resulting in some water pollution problems. Compared to other farmed fish, catfish need much less fishmeal and fish oil from wild sources in their feed, and they're native to where they're farmed.



Black Sea Bass, U.S. Mid-Atlantic

Black Sea Bass begin life as females and become males by the time they're five years old, a characteristic that potentially increases their vulnerability to fishing pressure. Strong management in recent years has helped Black Sea Bass in the Mid-Atlantic recover from being overfished in the 1990s.



Shrimp, U.S.-farmed

Farmed shrimp require high amounts of fishmeal and fish oil in their food compared to other farmed fish and shellfish. To reduce pollution when shrimp water is discharged, it is usually treated. Imported farmed shrimp come from areas with weaker environmental protections, and practices commonly damage ecosystems. U.S. farm-raised shrimp are a better alternative to imported farm-raised shrimp and to trawl-caught shrimp.



Tilapia, U.S.-farmed

Mainly herbivores, tilapia require little or no wild fish in their feed. Tilapia farms in the U.S. have fewer pollution and escape problems compared to foreign tilapia farms. However, because they are non-native, escapes that do occur jeopardize native fish populations.



Dungeness, King, and Stone Crabs

Dungeness, King, and Stone Crabs are fairly abundant thanks to wise management. Dungeness and Stone Crabs have high fertility and other reproductive strategies that help them withstand fishing pressure. King Crabs brood their eggs for a year, making them vulnerable to fishing pressure. Fishers use relatively low-bycatch traps (or pots) to catch these crab species.



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. Accidental deaths of seabirds, especially North Pacific albatrosses, is a concern in the Alaskan bottom longline fishery.



Rainbow Trout

While overall a good choice, some problems with farming Rainbow Trout exist. Their feed contains large amounts of fishmeal and fish oil, and their farms are known to create some water pollution.



Swordfish

Swordfish remain overfished in the North Atlantic, but stronger catch regulations are resulting in signs of recovery. While abundance appears high in the North Pacific, their status is unclear in other regions of the Pacific. Most Swordfish are longline-caught, with high bycatch of marine mammals, sea turtles, and sharks.



Blue*, Snow, and Tanner Crabs

Exploited heavily, some populations of these species are overfished. 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 aggregations, which makes them easier to catch. Fishers catch crabs mostly with low-bycatch traps.



Lingcod, U.S. West Coast

Lingcod dwell along the ocean bottom off the U.S. West Coast and are popular among recreational fishers. Commercial trawl fisheries that target Lingcod also incidentally catch depleted rockfish, which remains

a major problem. While overfished for many years, Lingcod now shows signs of rebounding.



Monkfish

Difficult to target specifically, Monkfish are caught along with other groundfish such as Atlantic Cod and Haddock in the Northeast U.S. This fishery historically faced poor management, resulting in overfishing, depletion, and job losses. Monkfish are taken mostly with gillnets and trawls, which cause high bycatch.



Bigeye, Albacore, Yellowfin, and Skipjack Tuna, longline-caught or canned

Despite their potential resilience to fishing pressure, with their naturally high fertility and wide ranges, some Bigeye, Albacore ("chunk white"), Yellowfin ("chunk light"), and Skipjack Tuna populations are declining from heavy fishing pressure. Globally, few regulations exist for tuna fisheries, and longline and purse-seine fishing gear catch large numbers of marlins, sharks, sea turtles, marine mammals, and young tunas. Despite U.S. "Dolphin Safe" standards for the canned tuna market, dolphins are not recovering. Pole- and troll-caught tuna are better alternatives.



Sea Scallops

Wild Sea Scallops were once overfished but have since recovered. With fishing pressure still high, recent management measures are controversial. Bottom dredges and trawls used to catch Sea Scallops inadvertently damage habitat, and there is high unintended catch of Atlantic Cod, Monkfish, flounders, and skates.



Sharks, U.S.

Many shark species mature late, grow slowly, and have few offspring, making them vulnerable to fishing pressure. Populations of commonly caught sharks in U.S. waters are generally in better shape than those found elsewhere in the world. Recent efforts by U.S. scientists to assess shark abundance, combined with a prohibition on shark finning, represent improvements in shark fishery management.



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. Especially strong management measures have helped Summer Flounder (fluke) rebound.



Groupers

Generally long-lived, many groupers have sedentary lives, change sex with age, and spawn in groups, making them particularly vulnerable to overfishing. Most groupers sold in the U.S. are imported, generally from countries with little management. Some grouper species in U.S. waters are recovering with the aid of improved management.



Orange Roughy

Orange Roughy, which don't mature until they're at least 20 years old and can live over 100 years, show dramatic population declines in some areas. They live in deep waters, where they're caught with habitat-damaging trawls when they gather in groups to feed or spawn off seamounts and oceanic cliffs. A number of deep-sea shark species inadvertently caught in Orange Roughy fisheries are threatened.



Chilean Seabass

Really named Patagonian Toothfish, high demand for this naturally long-lived fish drives depletion and creates an incentive for continued illegal fishing. Incidental catch of albatrosses and petrels in Patagonian Toothfish fisheries jeopardizes their populations.



Rockfish, U.S. West Coast

Rockfish have a long lifespan, making them vulnerable to fishing pressure. Many commercially important rockfish species off the U.S. West Coast are overfished. Adequate population assessments are lacking for other species. Management measures including area closures to help populations recover are in place but have not yet proven successful.

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