

FishWatch Species Information¹

Mahi-mahi (Dolphinfish) (*Coryphaena hippurus*)

- Population status is not formally assessed but is assumed to be stable. No overfishing appears to be occurring.
- Size and harvest restrictions have been implemented in the Atlantic to ensure that the U.S. fishery remains stable. Catch trends in the Pacific have indicated that specific management measures for dolphinfish are not yet necessary.
- Dolphinfish is low in saturated fat and is a good source of vitamin B12, phosphorus, and potassium and a very good source of protein, niacin, vitamin B6, and selenium. For more on nutrition, see Nutrition Facts. (USDA)
- Dolphinfish is not related to dolphin the mammal. Dolphinfish is called mahi-mahi in the Pacific, and that name is often used when marketing the species at the retail and restaurant level.

Sustainability Status

Biomass: There are no current estimates of biomass.

Overfishing: No (South Atlantic and Gulf); Unknown (Pacific)

Overfished: No (South Atlantic and Gulf); Unknown (Pacific)

Fishing and habitat: Any effects are minimal and temporary.

Bycatch: Regulations in the South Atlantic Fishery Management Council's **Dolphin-Wahoo FMP** for the Atlantic address requirements to reduce bycatch and mortality of bycatch. Longline vessels must also comply with sea turtle protection measures.

Aquaculture: There is currently no commercial aquaculture of mahi-mahi in the U.S.

American Lobster (*Homarus americanus*)

- Populations of American lobster in the Gulf of Maine and Georges Bank are healthy and overfishing is not occurring. However, in Southern New England, lobster are overfished and overfishing is occurring.
- NOAA Fisheries Service implements regulations for the American lobster fishery in offshore federal waters complementary to those implemented by the Atlantic States Marine Fisheries Commission in state waters.
- Lobster is low in saturated fat and is a very good source of protein and selenium. For more information, see Nutrition Facts. (USDA)
- American lobster is one of the most valuable fisheries in the eastern United States, with landings of 81.8 million pounds valued at \$306.2 million in 2008. Maine, with landings of 63.4 million pounds in 2008, accounted for the majority of total American lobster landings for the 27th year in a row.

Sustainability Status

Biomass: Gulf of Maine and Georges Bank abundance estimates are above their respective thresholds; Southern New England is not. The average abundance estimates of American lobster in the Gulf of Maine, Georges Bank, and Southern New England over the past 3 years have been 123 million lobsters, 9 million lobsters, and 19 to 25 million lobsters, respectively.

Overfishing: Yes (Southern New England); No (Gulf of Maine, Georges Bank)

Overfished: Yes (Southern New England); No (Gulf of Maine, Georges Bank)

Fishing and habitat: The principal fishing gear used to catch lobster is the trap. Lobster are also taken as bycatch in otter trawls. Lobster traps have very little impact on the habitat. Otter trawls may impact habitat, depending on where they are used.

Bycatch: A number of finfish (such as cod, tautog, scup, black sea bass, eels, and flounder) and invertebrates (such as rock, Jonah, and red crabs and conch) can be found in lobster traps in both inshore and offshore fisheries. Ghost traps (lost gear that continues to fish) can also be a problem in the lobster fishery. Biodegradable escape panels or hinges are required on traps to prevent ghost fishing. NOAA Fisheries Service implemented an October 2007 **final rule** requiring larger escape vents. The Northeast/Mid-Atlantic American lobster trap/pot fishery is a Category I fishery according to the Marine Mammal Protection Act's annual **List of Fisheries**. This means that annual mortality and serious injury of certain marine mammal stocks in this fishery is greater than or equal to 50 percent of the Potential Biological Removal level. NOAA Fisheries Service is addressing this challenge through the **Atlantic Large Whale Take Reduction Team**, and implemented an October 2007 **final rule** to further protect large whales from American lobster gear.

Aquaculture: Research is currently underway to develop rearing techniques and to assess the economic feasibility of commercial aquaculture of American lobster.

¹ This information was recorded from FishWatch in August 2010. Species stock information may have changed since, check online for the latest information: <http://www.nmfs.noaa.gov/fishwatch/>

Alaska Snow Crab (*Chionoecetes opilio*)

- Snow crab population levels are rebuilding, and overfishing is not occurring.
- Snow crab are managed using quotas that include shares specifically for Alaska communities.
- Crab provides many dietary benefits including a low-fat source of protein. For more on nutrition, see Nutrition Facts. (USDA)
- In 2008, 58.5 million pounds of snow crab were caught and retained in U.S. fisheries in the Bering Sea. U.S.-caught snow crab makes up about a third of the snow crab for sale in the United States. The rest is imported, mainly from Canada.

Sustainability Status

Biomass: In the Bering Sea, snow crab biomass estimates are currently 74% of the target level.

Overfishing: No

Overfished: No

Fishing and habitat: Crab pots can affect habitat when they settle to the bottom and when they are hauled back to the surface, but the extent of these impacts depends on the type of bottom habitat and the portion of that habitat utilized by the fishery. Snow crab are fished in areas of soft sediment like silt and mud at depths of 240 to 600 feet. Sand and soft sediments are less likely to be affected than other habitat types. Also, pots are considered to be less damaging than mobile gear because they are stationary and come into direct contact with a much smaller area of the seafloor.

Bycatch: Bycatch in directed crab fisheries includes female crab, males under the commercial size (101 millimeters - legal size is 78 mm), and non-targeted crab. Several modifications to pot gear have been introduced to reduce bycatch mortality including escape panels and rings to prevent ghost fishing (when lost pots continue to capture and kill species). Crab fisheries also catch a small amount of other species as bycatch including octopus, Pacific cod, Pacific halibut, and other flatfish, sponges, coral, and sea stars. All bycatch is discarded at sea.

Aquaculture: There is currently no aquaculture of snow crab in the U.S.

Red King Crab (*Paralithodes camtschaticus*)

- Red king crab is mainly harvested in the Bristol Bay area of Alaska. This population of red king crab is currently stable and healthy.
- Managers have recently implemented the **Crab Rationalization Program** to decrease fishing capacity (the number of crab fishing vessels and processing capacity in Alaska) to improve conservation and minimize community impacts of regulations.
- Crab provides many dietary benefits including a good source of protein. For more on nutrition, see Nutrition Facts. (USDA)
- The Bristol Bay red king crab fishery is currently one of the most valuable in the United States. In 2008, 27.2 million pounds of red king crab were harvested with a value of \$120.2 million.

Sustainability Status

Biomass: Bristol Bay, Pribilof District, and Norton Sound biomass estimates are all above target levels. Biomass estimates are not available for the Aleutian Islands area.

Overfishing: No*

Overfished: No*

Fishing and habitat: Crab pots can affect habitat when they settle to the bottom and when they are hauled back to the surface, but the extent of the impacts depends on the type of bottom habitat and the portion of that habitat utilized by the fishery. Red king crab are mostly fished in areas of sand and silt bottoms at depths of 120 to 600 feet. Sand and soft sediments are less likely to be affected than other habitat types. Also, pots are considered to be less damaging than mobile gear because they are stationary and come into direct contact with a much smaller area of the seafloor.

Bycatch: Bycatch in directed crab fisheries includes female crab, males under the legal size, and non-targeted crab. Several modifications to pot gear have been introduced to reduce bycatch mortality including escape panels and rings to prevent ghost fishing (when lost pots continue to capture and kill species). Crab fisheries also catch a small amount of other species as bycatch including octopus, Pacific cod, Pacific halibut, and other flatfish, sponges, coral, and sea stars. All bycatch is discarded at sea.

Aquaculture: With help from the **NOAA Aquaculture Program**, the **NOAA Alaska Fisheries Science Center Kodiak Lab** and **Alaska Sea Grant** are currently conducting research aimed at hatching and rearing red and blue king crab in a large-scale hatchery setting to restore and rehabilitate these once-major, multimillion-dollar wild king crab fisheries around Kodiak Island and the Pribilof Islands in the Bering Sea. This partnership involves fishermen, scientists, and state and federal managers.

Atlantic Surfclam (*Spisula solidissima*)

- Population levels of Atlantic surfclam are high, and no overfishing is occurring.
- Atlantic surfclams were one of the first species to have a fisheries management plan as directed in 1976 by the **Magnuson-Stevens Act**, and they are currently managed under an Individual Transferable Quota (ITQ) system.
- Surfclams provide a low-fat, high-quality protein and are an excellent source of selenium and niacin. For more on nutrition, see Nutrition Facts. (USDA)
- Surfclams are used to manufacture processed clam products such as breaded clam strips, minced clams, stuffed clam products, chowders, and broth.

Sustainability Status

Biomass: Biomass is 30% above the biomass that supports maximum sustainable yield (B_{MSY}).

Overfishing: No

Overfished: No

Fishing and habitat: Atlantic surfclams burrow into sandy bottoms on the continental shelf. This is a "high energy" environment and is thought to recover quickly following the passage of a hydraulic clam dredge. The area actually disturbed by surfclam dredges is an extremely small percentage of the total sandy bottom of the Mid-Atlantic bight. Any impacts from fishing gear are considered temporary and minimal; the habitat's functions are not likely to be affected.

Bycatch: The surfclam fishery is managed under an individual transferable quota (ITQ) management system that reduces the "race to fish" and therefore significantly reduces bycatch. Surfclam fisheries are extremely clean - surfclams constitute nearly 90% of the total number of animals caught during surveys. Commercial clam dredges have bars that are spaced several inches apart so as not to collect anything but the targeted surfclams; however, large fish, mollusks, and crabs that are too large to pass through the bars are retained in the dredge.

Aquaculture: There is currently no commercial aquaculture of Atlantic surfclams in the U.S.

Pacific Halibut (*Hippoglossus stenolepis*)

- Pacific halibut populations are healthy.
- Pacific halibut is managed by a treaty between the U.S. and Canada through recommendations of the International Pacific Halibut Commission.
- Halibut is low in saturated fat and sodium and is a very good source of protein, niacin, phosphorus, and selenium. For more on nutrition, see Nutrition Facts. (USDA)
- Close to 100% of the halibut landed in the U.S. is Pacific halibut. The main sources for Pacific halibut are the U.S. and Canada.

Sustainability Status

Biomass: Coastwide exploitable biomass in 2010 is estimated to be 334 million pounds.

Overfishing: Undefined

Overfished: No

Fishing and habitat: Bottom longline gear is the main commercial gear used to target halibut. The effects of bottom longline gear on habitats are poorly understood but could include disturbance of sediments, benthic structures, and other organisms.

Bycatch: Seabirds, including short-tailed albatross, blackfooted/Laysan albatross, northern fulmars, and shearwaters. Regulations are in effect that make it mandatory for longline vessels to use seabird avoidance devices. The IPHC is also involved in bird bycatch research and acts as a repository for multi-agency observations on seabird distribution. The commercial fishery switched from J-hooks to circle hooks in 1983, which lowered mortality on sub-legal sized halibut released during commercial fishing. Incidentally-caught groundfish stocks include some that are overfished, such as canary and yelloweye rockfish in Washington and Oregon waters, as well as healthy stocks of Pacific cod, other rockfish, and flatfish. Regulations prohibit commercial Pacific halibut fisheries in specific depths and areas off Washington, Oregon, and California, and conservation areas are closed to all fishing in several areas off the Pacific coast and Bering Sea. The IPHC is conducting joint research with NOAA Fisheries Service, the Pacific States Marine Fish Commission, the North Pacific Research Board, and the halibut industry to evaluate use of electronic monitoring (cameras and GPS) to characterize bycatch in the Alaskan halibut fishery.

Aquaculture: There is no commercial aquaculture of Pacific halibut on the west coast of the United States or Alaska.

Atlantic Salmon (Wild) (*Salmo salar*)

- Wild Atlantic salmon population levels are very low, and commercial fishing for the species is prohibited. Almost all of the Atlantic salmon sold in the United States comes from aquaculture operations.
- Atlantic salmon aquaculture in the United States meets high environmental and health standards and is involved in improving best practices for aquaculture worldwide.
- Salmon is an excellent source of protein and omega-3 fatty acids. For more information on nutrition, please see Nutrition Facts. (USDA)
- Atlantic salmon is currently produced domestically in aquaculture operations in Maine and Washington State. The United States also imports farmed salmon, mainly from Norway, Chile, and Canada.

Sustainability Status

Biomass: Atlantic salmon stocks are currently at perilously low levels.

Overfishing: No - commercial fisheries are prohibited.

Overfished: Yes - commercial and recreational fisheries were permitted for much of the 20th century and contributed to the historic decline of Atlantic salmon.

Fishing and habitat: There is currently no directed or incidental commercial fishery for Atlantic salmon in federal waters.

Bycatch: There is currently no directed or incidental commercial fishery for Atlantic salmon in federal waters.

Aquaculture: With the decline of wild Atlantic salmon populations in the early 1800s, fish culture efforts have sustained an important Atlantic salmon fishery resource in New England. Since the first state fish commission was established in New Hampshire in 1864, salmon have been regulated and cultured in an effort to preserve this valuable fisheries resource. Commercial aquaculture ventures started in the late 1970s with the first experimental harvest of Atlantic salmon in 1979 of 6 metric tons (13,227 pounds). Since then, the mariculture industry in eastern North America has grown to produce more than 32,000 metric tons (70.5 million pounds) annually since 1997. In Maine, production increased rapidly and peaked at about 16,500 metric tons (36.5 million pounds) in 2000, but abruptly declined to below 6,000 metric tons (13.2 million pounds) in 2005.

Atlantic Sea Scallop (*Placopecten magellanicus*)

- Atlantic sea scallop population levels are high; overfishing is not occurring.
- Scallops are managed using a combined approach of effort limitation and rotating harvest areas, which maximizes scallop yields while protecting beds of young scallops.
- Scallops are a good low-fat source of protein and are high in selenium and B vitamins. For more information, see Nutrition Facts. (USDA)
- The U.S. sea scallop fishery is extremely important to the economy and is the largest wild scallop fishery in the world. In 2008, 53.5 million pounds of sea scallop meats worth \$370 million were harvested in the United States. The majority comes from Massachusetts and New Jersey.

Sustainability Status

Biomass: In 2006, biomass was estimated to be 166,000 metric tons meats, 52% above the biomass needed for maximum sustainable yield (109,000 metric tons meats).

Overfishing: No

Overfished: No

Fishing and habitat: Scallop dredges can have long term effects on habitat. In some cases, areas are closed to scallop dredges to protect sensitive habitats and scallop populations. For more information, see Fisheries Gear.

Bycatch: Bycatch of finfish (such as yellowtail flounder, skates, and monkfish), sea turtles, and undersized scallops have been identified as concerns in this fishery.

Aquaculture: There is currently no commercial aquaculture of sea scallops in the U.S.

Brown Shrimp (*Farfantepenaeus aztecus*)

- Population levels of brown shrimp are high, and overfishing is not occurring.
- Commercial fisheries for shrimp continue to work to reduce the harmful impacts of bycatch of non-target species, including red snapper.
- Shrimp is low in saturated fat and is a very good source of protein, selenium, and vitamin B12. For more information, see Nutrition Facts. (USDA)
- Only about 10% of the shrimp consumed in the United States come from U.S. sources. The rest are imported, and most are grown in aquaculture. For more information on shrimp imports see the [Trade](#) page.

Sustainability Status

Biomass: Biomass estimates are not as meaningful for shrimp management as they are with management of most other stocks. See the Biomass and landings section below.

Overfishing: No

Overfished: No

Fishing and habitat: Trawling can affect the seabed in a variety of ways. Individual impacts may be relatively minor, but the cumulative effect and intensity of trawling may have long-term effects on bottom communities. These effects also depend upon site-specific characteristics of the local ecosystem such as bottom type, water depth, community type, gear type, and natural disturbances. Trawling is prohibited in areas supporting coral reefs and other known areas of high-relief or significant biological communities. In the Gulf of Mexico, a "weak-link" is required in the tickler chain to allow it to drop away if the chain gets hung up on natural bottom structures.

Bycatch: Bycatch varies by depth and area fished. In the Gulf of Mexico, more than 450 groups of organisms are taken as bycatch in shrimp trawls. By weight, approximately 67 percent of catch is finfish, 16 percent is commercial shrimp, and 17 percent is invertebrates. Atlantic croaker and longspine porgies are the two most dominant species taken in Gulf shrimp trawls. Red snapper comprise a small portion of overall shrimp trawl bycatch in the Gulf (about 0.5 percent of the overall catch), but this bycatch reduces survival of these fish to the directed fishery. In the South Atlantic, shrimp account for approximately 20% of the total catch by weight. Finfish account for 47% of the total shrimp trawl catch, while crustaceans and other invertebrates account for the remainder of the catch. Important species caught as bycatch in the South Atlantic include spot, Atlantic croaker, weakfish and Spanish mackerel. Sea turtles are also caught as bycatch in shrimp trawls. Shrimp trawlers must comply with federal sea turtle conservation requirements, including the use of [Turtle Excluder Devices \(TEDs\)](#).

Aquaculture: Brown shrimp is not currently produced in aquaculture in the U.S., but about 8 million pounds of Pacific Whiteleg Shrimp (*Litopenaeus vannamei*) are grown in U.S. aquaculture each year.

Red Snapper (*Lutjanus campechanus*)

- The Gulf and South Atlantic red snapper populations are currently at very low levels (overfished), and both red snapper populations are being harvested at too high a rate (overfishing).
- In addition to overharvest and discards of red snapper in the directed fishery, bycatch (unintended and unused harvest) of juvenile red snapper by the Gulf shrimp fisheries has contributed to the depletion of Gulf red snapper; managers are working to reduce the bycatch of red snapper in both directed and shrimp fisheries. NOAA Fisheries Service also [recently announced a temporary regulation](#) to prohibit fishing for red snapper in the South Atlantic for six months beginning in January 2010. The fishery will be closed to protect the species from overharvest while managers determine long-term solutions to address the critical condition of red snapper.
- Snapper is low in saturated fat and sodium and is a very good source of protein. For more information, see Nutrition Facts. (USDA)
- Many fish that are red are passed off as red snapper in the marketplace, but the only species that can be legally labeled red snapper is the American red snapper, *Lutjanus campechanus*. Red snapper have trademark red skin and red eyes and come from waters off the Southeast Atlantic and Gulf states and Mexico.

Sustainability Status

Biomass: The Gulf of Mexico breeding population is 11% of the target size and the South Atlantic breeding population is 3% of the target size.

Overfishing: Yes (S. Atlantic and Gulf)

Overfished: Yes (S. Atlantic and Gulf)

Fishing and habitat: Red snapper are primarily harvested with hook and line. Commercial fishermen typically attach multiple hooks to a vertical line with a weight at the bottom. Little scientific information exists on the physical impacts on marine habitats from this type of gear, although they are thought to be minimal. Red snapper may also be harvested with longlines and spears.

Bycatch: Unintended catch includes sea turtles, sea birds, and other species of reef fish, primarily including groupers, vermilion snapper, and gray triggerfish.

Aquaculture: Mutton snapper, a close relative of red snapper, are being researched as a possible candidate for offshore aquaculture. Red snapper have been grown in culture facilities and released for experiments on potential enhancement of wild stocks.

Pink Shrimp (*Farfantepenaeus duorarum*)

- Population levels of pink shrimp in the Gulf of Mexico are stable. The pink shrimp population of the South Atlantic is low (but likely due to environmental factors rather than fishing pressure).
- Commercial shrimp fishermen continue to work to reduce the harmful impacts of bycatch of non-target species, including red snapper.
- Shrimp is low in saturated fat and is a very good source of protein, selenium, and vitamin B12. For more on nutrition, see Nutrition Facts. (USDA)
- Only about 10% of the shrimp consumed in the United States come from U.S. sources. The rest are imported, and most are grown in aquaculture. For more information on shrimp imports see the [Trade page](#).

Sustainability Status

Biomass: Biomass estimates are not as meaningful for shrimp management as they are with management of most other stocks. See the Biomass and landings section below.

Overfishing: No

Overfished: Yes* (South Atlantic); No (Gulf of Mexico)

Fishing and habitat: Trawling can affect the seabed in a variety of ways. Individual impacts may be relatively minor, but the cumulative effect and intensity of trawling may have long-term effects on bottom communities. These effects also depend upon site-specific characteristics of the local ecosystem such as bottom type, water depth, community type, gear type, and natural disturbances. Trawling is prohibited in areas supporting coral reefs and other known areas of high-relief or significant biological communities.

Bycatch: Bycatch varies by depth and area fished. In the Gulf of Mexico, more than 450 groups of organisms are taken as bycatch in shrimp trawls. By weight, approximately 67 percent of catch is finfish, 16 percent is commercial shrimp, and 17 percent is invertebrates. Atlantic croaker and longspine porgies are the two most dominant species taken in Gulf shrimp trawls. Red snapper comprise a small portion of overall shrimp trawl bycatch in the Gulf (about 0.5 percent of the overall catch), but this bycatch reduces survival of these fish to the directed fishery. In the South Atlantic, shrimp account for approximately 20% of the total catch by weight. Finfish account for 47% of the total shrimp trawl catch, while crustaceans and other invertebrates account for the remainder of the catch. Important species caught as bycatch in the South Atlantic include spot, Atlantic croaker, weakfish, and Spanish mackerel. Sea turtles are also caught as bycatch in shrimp trawls. Shrimp trawlers must comply with federal sea turtle conservation requirements, including the use of [Turtle Excluder Devices \(TEDs\)](#).

Aquaculture: Pink shrimp is not currently produced in aquaculture in the U.S., but about 8 million pounds of Pacific Whiteleg Shrimp (*Litopenaeus vannamei*) are grown in U.S. aquaculture each year.

*Although this stock is listed as overfished, a formal rebuilding plan is not required

Longfin Inshore Squid (Atlantic Loligo) (*Loligo pealeii*)

- Longfin squid population levels are high, and overfishing is not occurring.
- The longfin squid fishery is managed using several methods that include an annual catch quota, a minimum codend mesh size (for nets), and a limited access permit program.
- Squid are an excellent source of selenium, riboflavin, and vitamin B12. For more on nutrition, see Nutrition Facts. (USDA)
- The majority of the world's catch of longfin squid comes from the waters of the northwest Atlantic Ocean. The United States is the primary source for this species.

Sustainability Status

Biomass: Estimates of biomass required to support maximum sustainable yield are currently not available.

Overfishing: No

Overfished: No

Fishing and habitat: The fishery is dominated by small-mesh bottom trawlers that fish throughout the year (inshore during spring through early fall and offshore during the rest of the year). Near-shore pound net and fish trap fisheries also occur during spring and summer when the squid migrate inshore to spawn.

Bycatch: In the small-mesh longfin squid fishery, there is bycatch of marine mammals and large pelagic species, including pilot whales, common dolphin, swordfish, and a variety of shark, ray, and tuna species. The main commercial species that are discarded in the fishery include butterfish, red hake, Illex squid, fluke, herring, spiny dogfish, silver hake, and Atlantic mackerel. Amendment 10 of the FMP will address bycatch reduction of butterfish (an overfished stock) and other species in the longfin squid fishery.

Aquaculture: There is currently no commercial aquaculture of longfin squid in the U.S., but this species is reared in the laboratory for research purposes.

Pacific Sardine (*Sardinops sagax caerulea*)

- The Pacific sardine has experienced a remarkable comeback after populations dropped drastically in the 1950s. Today, this species and fishery are thriving once again.
- The Pacific Fishery Management Council sets an annual quota for the harvest of Pacific sardine based on scientific assessments of the species.
- Sardines are very high in selenium and vitamin B12 and high in calcium, niacin, and phosphorus, but they are also high in cholesterol. For more information, see Nutrition Facts. (USDA)
- About a quarter of the U.S. Pacific sardine harvest is eaten domestically, typically fresh or canned. The rest is usually frozen and exported, mainly to Japan for consumption or for use as bait and to Australia for use as feed in their bluefin tuna farming operations.

Sustainability Status

Biomass: Pacific sardine biomass is high.

Overfishing: No

Overfished: No

Fishing and habitat: Pacific sardine are caught with roundhaul gear (purse seine or lampara nets), which likely have little effect on habitat.

Bycatch: Roundhaul fishing results in little unintentionally caught fish, primarily because fishermen target a specific school, which usually consists of one species. The most common incidental catch in coastal pelagic species (CPS) fisheries is other coastal pelagic species. However, bycatch of Pacific salmon listed under the Endangered Species Act has been a concern for the sardine fishery off Oregon and Washington. In 2006, NOAA Fisheries Service issued an opinion that determined that fishing for CPS is not likely to jeopardize the continued existence of any endangered or threatened species, specifically chinook and coho salmon.

Aquaculture: There is currently no commercial aquaculture of Pacific sardine in the U.S.

Black Sea Bass (*Centropristis striata*)

- According to the most recent assessment, black sea bass in the Mid-Atlantic is considered rebuilt and overfishing is not occurring. In the South Atlantic, black sea bass is overfished and overfishing is occurring.
- An amendment was enacted in 2006 to end overfishing for black sea bass in the South Atlantic by gradually reducing fishing mortality for the species.
- Black sea bass is a good low-fat source of protein and magnesium. For more on nutrition, see Nutrition Facts. (USDA)
- Black sea bass is an important recreational and commercial species along the Atlantic coast of the U.S.

Sustainability Status

Biomass: The results from the most recent stock assessment of black sea bass in the Mid-Atlantic were found to be uncertain, but biomass was estimated to be 3% above the target level in 2008. In the South Atlantic, biomass is only 27% of the target level.

Overfishing: Yes (South Atlantic); No (Mid-Atlantic)*

Overfished: Yes (South Atlantic); No (Mid-Atlantic)*

Fishing and habitat: In the Mid Atlantic, primary gear includes sea bass pots, otter trawls, and hook and line. In the South Atlantic, the most common commercial gear is traps (or pots), with some fish taken by handline as well. Some impacts have been reported from traps and trawl gear but no specific mitigation has been proposed in the Mid-Atlantic. Trawling has been banned in the South Atlantic since 1989.

Bycatch: Bycatch in the pot fishery is minor as the gear is often not baited (black sea bass are drawn to structure so they will enter without bait). Floating traps and weirs take a variety of marketable species incidentally including squids, flounders, striped bass, bluefish, and scup. The amount of bycatch in the trawl fishery is dependent on the mesh size.

Aquaculture: The demand for black sea bass exceeds supply, and the high market value has prompted research to evaluate their potential for commercial aquaculture. NOAA researchers recently evaluated the aquaculture potential of black sea bass and found promising results - that [sea bass can be grown from larvae to adults in recirculating aquaculture systems](#).

*Results from the most recent assessment of Mid-Atlantic black sea bass were found to be uncertain.

Yellowfin Sole (*Limanda aspera*)

- Yellowfin sole has recovered from overfishing by foreign fleets in the 1960s and is now very abundant.
- The fishery for yellowfin sole is regulated by series of management measures developed by the North Pacific Fishery Management Council.
- Yellowfin sole is an excellent source of low-fat protein, calcium, and other important nutrients. For more on nutrition, see Nutrition Facts. (USDA)
- Yellowfin sole is the target of the largest flatfish fishery in the United States. Alaska is responsible for the majority of the worldwide yellowfin sole catch, harvesting over 311 million pounds in 2008. Yellowfin is typically fished from spring through December, and most of the yellowfin harvest is taken during the spring and summer.

Sustainability Status

Biomass: Biomass in the Bering Sea and Aleutian Islands area is well above the biomass needed to support maximum sustainable yield (B_{MSY}), at 74% above B_{MSY} .

Overfishing: No

Overfished: No

Fishing and habitat: Yellowfin sole are primarily caught with bottom trawl gear mainly over soft, sand bottoms. Because the species inhabiting soft bottom communities are frequently fast growing and short-lived, these communities may be more resilient to trawling impacts than other habitats. NOAA Fisheries Service Alaska Fisheries Science Center's Auke Bay Laboratory and Resource Assessment and Conservation Engineering Division are currently conducting [studies](#) on the effects of bottom trawling on habitat.

Bycatch: The main species caught as bycatch in the yellowfin sole fishery are Pacific halibut, Pacific cod, rock sole, flathead sole, pollock, Alaska plaice, arrowtooth flounder, snow crab, and red king crab.

Aquaculture: There is currently no commercial aquaculture of yellowfin sole in the United States.

North Atlantic Swordfish (*Xiphias gladius*)

- U.S. North Atlantic swordfish population levels are high and overfishing is not currently occurring on the stock.
- Strict federal fisheries management measures are improving the condition of the fishery, and a [fishing industry/NOAA partnership](#) is successfully reducing sea turtle bycatch.
- Swordfish is an excellent source of selenium, niacin, and vitamin B12 and a good source of zinc. Swordfish may contain amounts of methylmercury in excess of the FDA's recommended limit for moms, moms-to-be, and young children. For more information, see [EPA and FDA advice on what you need to know about mercury in fish and shellfish](#).
- About a third of the swordfish caught in U.S. commercial fisheries in 2008 came from the Atlantic and Gulf of Mexico; the rest was Pacific swordfish, where population levels are also high. The United States also imports swordfish, mainly from Canada, Singapore, Panama, and Ecuador.

Sustainability Status

Biomass: The North Atlantic swordfish population is now fully rebuilt; biomass estimates are currently 5% above the target level.

Overfishing: No

Overfished: No

Fishing and habitat: U.S. commercial fishermen mainly use pelagic longline gear to capture North Atlantic swordfish. Pelagic longline gear has no impacts on ocean floor habitats because it does not come in contact with the bottom. Fishermen also use rod and reel, harpoon, and buoy gear to fish for swordfish.

Bycatch: Pelagic longline gear sometimes catches non-target finfish with little or no commercial value, as well as species that cannot be retained by commercial fishermen due to regulations, such as billfish. Pelagic longlines may also interact with protected species such as marine mammals, sea turtles, and seabirds. Area closures are used to minimize bycatch by closing ocean areas that historically have the highest rates of bycatch, and Vessel Monitoring Systems are required on U.S. Atlantic pelagic longline vessels to enforce the closures and monitor the fishery. Circle hooks are also required to increase post-release survival of animals that are inadvertently caught. Additionally, U.S. Atlantic pelagic longline fishermen must attend workshops to learn how to properly handle and release these animals. The Atlantic, Caribbean, and Gulf of Mexico large pelagics longline fishery is designated as a Category I fishery according to the [List of Fisheries](#) published annually by NOAA Fisheries Service as required under the [Marine Mammal Protection Act](#). This means that annual mortality and serious injury of certain marine mammal stocks in this fishery are greater than or equal to 50% of the Potential Biological Removal level (the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing it to be at sustainable levels). NOAA Fisheries Service is addressing this challenge through the [Pelagic Longline Take Reduction Team](#), which works to reduce serious injuries and mortalities of short-finned pilot whales, long-finned pilot whales, and Risso's dolphins in the Mid-Atlantic portion of the Atlantic pelagic longline fishery. Swordfish are also fished commercially with buoy, harpoon, and rod and reel gear, which are all considered commercial handgears. Commercial handgear used for swordfish is very selective and has minimal levels of protected resource bycatch.

Aquaculture: There is currently no commercial aquaculture of swordfish in the U.S.

Atlantic Yellowfin Tuna (*Thunnus albacares*)

- The Atlantic yellowfin tuna stock is believed to be near target levels, and overfishing is not occurring.
- Atlantic yellowfin tuna are managed both domestically (by NOAA Fisheries Service Highly Migratory Species Management Division) and internationally (by the **International Commission for the Conservation of Atlantic Tunas** and other organizations).
- Yellowfin is low in saturated fat and sodium and is a very good source of protein, thiamin, selenium, and vitamin B6. For more on nutrition, see Nutrition Facts. (USDA)
- Yellowfin tuna is sold fresh, frozen, or canned as light-meat tuna (often blended with skipjack tuna and a bit darker in color than canned albacore).

Sustainability Status

Biomass: The Atlantic yellowfin tuna stock biomass level is estimated to be 96% of the level needed to support maximum sustainable yield (near the target level recommended by ICCAT).

Overfishing: No

Overfished: No

Fishing and habitat: In U.S. fisheries, Atlantic yellowfin are caught primarily with longline, handline, and rod and reel gear. Internationally, purse seines and baitboats are also important gear. Habitat damage by fishing gear used to capture highly migratory species, other than bottom longlines, is minor because it rarely comes in contact with the ocean floor.

Bycatch: Pelagic longline gear sometimes catches non-target finfish with little or no commercial value, as well as species that cannot be retained by commercial fishermen due to regulations, such as billfish. Pelagic longlines may also interact with protected species such as marine mammals, sea turtles, and seabirds. Area closures are used to minimize bycatch by closing ocean areas that historically have the highest rates of bycatch, and Vessel Monitoring Systems are required on U.S. Atlantic pelagic longline vessels to enforce closures and monitor the fishery. Circle hooks are also required to increase post-release survival of animals that are inadvertently caught. Additionally, U.S. Atlantic pelagic longline fishermen must attend workshops to learn how to properly handle and release these animals. The Atlantic, Caribbean, and Gulf of Mexico pelagic longline fishery is designated as a Category I fishery according to the **List of Fisheries** published annually by NOAA Fisheries Service as required under the **Marine Mammal Protection Act**. This means that annual mortality and serious injury of certain marine mammal stocks in this fishery is greater than or equal to 50% of the Potential Biological Removal level (the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing it to be at sustainable levels). NOAA Fisheries Service is addressing this challenge through the **Pelagic Longline Take Reduction Team**, which works to reduce serious injuries and mortalities of short-finned pilot whales, long-finned pilot whales, and Risso's dolphins in the Mid-Atlantic portion of the Atlantic pelagic longline fishery. Troll-caught yellowfin tuna has very little bycatch.

Aquaculture: There is currently no commercial aquaculture of yellowfin tuna in the United States.