

## Sustainable Living: Sustainable seafood

by Shawn\_Dell\_Joyce

Ocean fish are the last wild creatures that people hunt on a large scale. We used to think of the ocean's bounty as endless. Recently, we have discovered its limits. Between 1950 and 1994, ocean fishermen increased their catch by 400 percent by doubling the number of boats they used and using more effective fishing gear, according to Monterey Bay Aquarium's Seafood Watch. In 1989, the world's catch leveled off at about 82 million metric tons of fish per year. We have reached "peak fish," and no number of boats would help us catch more. Today only 10 percent of all large fish — both open-ocean species (tuna, swordfish, marlin, etc.) and the large groundfish, such as cod, halibut, skates and flounder — are left in the sea, according to research published in National Geographic.

Overfishing has reduced oceanic fish populations by 90 percent since 1950, according to a recent study. Graphic supplied by Greenpeace International. "From giant blue marlin to mighty bluefin tuna, and from tropical groupers to Antarctic cod, industrial fishing has scoured the global ocean. There is no blue frontier left," lead author Ransom Myers told National Geographic. "Since 1950, with the onset of industrialized fisheries, we have rapidly reduced the resource base to less than 10 percent — not just in some areas, not just for some stocks, but for entire communities of these large fish species from the tropics to the poles."

"The impact we have had on ocean ecosystems has been vastly underestimated," said co-author Boris Worm. "These are the megafauna, the big predators of the sea, and the species we most value. Their depletion not only threatens the future of these fish and the fishers that depend on them, it could also bring about a complete re-organization of ocean ecosystems, with unknown global consequences."

Marine biologist Sylvia Earle said: "I don't blame the fishermen for this. We, the consumers, have done this because we have a taste for fish and 'delicacies' such as shark-fin soup. Our demand for seafood appears to be insatiable ... driven by high-end appetites. I've always believed that even when there is only one bluefin tuna left in the sea someone will pay a million dollars to be able to eat it."

Earle, who is also an author and sustainability advocate, pointed out: "Most people also don't know how bad it is for us to be eating so much fish, not only because of the destruction of an ecosystem vital to survival but also because the big predatory fish are full of the toxins and other pollutants that we cast into the oceans. It's not as healthy to eat fish as most people believe."

Coastal wetlands are fertile habitats for fish and shellfish but also popular places for people. More than half the world's people live near seacoasts, placing most of our large cities next to oceans. Bay waters are polluted by sewage, oil, chemicals and agricultural fertilizer. Paved surfaces near wetlands and tidal areas increase stormwater runoff.

Trawling and dragging are fishing methods that destroy habitats by dredging up seafloor. Some trawlers put rock-hopper gear, including old tires, along the bases of their nets to roll over rocky reefs, giving sea life no place to hide. Dredges drag nets with chain-mesh bases through soft sand or mud to catch scallops and sea urchins, crushing other life on the seafloor and damaging places where fish feed and breed. Some scientists believe that fishing with rock hoppers and dredges harms the ocean more than any other human activity.

According to the Food and Agriculture Organization of the United Nations, 1 in 4 animals caught in fishing gear dies as bycatch, i.e., unwanted or unintentionally caught. Tons of fish are tossed out because they're not what fishing boats are after, they have no market value, or they're too small to sell. Bycatch often kills young fish that could have rebuilt depleted populations if they had been allowed to grow up and breed. It is estimated that for each pound of shrimp caught in a trawl net, between 2 and 10 pounds of other marine life is caught and discarded as bycatch.

Some seafood can be farmed sustainably. Clams are raised in special beds on sandy shores, where their harvest does little to disturb the ecosystem. Oysters and mussels often are raised in bags or cages that are suspended off the seafloor, so little damage is done when they're harvested. Many farmed fish, such as salmon, are grown in net pens like cattle in feedlots. This is as environmentally damaging in the ocean as cattle feedlots are on land. Additionally, mangrove forests have been cut down and replaced with temporary shrimp farms, which supply shrimp to Europe, Japan and America until the water becomes polluted.

The following are the best choices for your dinner plate, according to the Seafood Choices Alliance: anchovies, arctic char, bluefish, catfish (farmed), clams, crabs (blue, Dungeness, king), crawfish, dogfish, hake, halibut (Pacific), herring (Atlantic), mackerel (Atlantic, Spanish), mussels (black, green-lipped), octopus (Pacific), oysters (farmed), Pacific black cod (sablefish), Pacific cod (pot- or jig-caught), pollock (Alaskan), prawns (trap-caught, Pacific), rock lobster (Australian), salmon (wild Alaskan), sardines (Pacific), scallops (bay-farmed), shrimp (U.S.-farmed), squid (Pacific), striped bass (hybrid), sturgeon (farmed), tilapia (farmed), tuna (Pacific albacore) and sea urchin.

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