

LOCAL THREATS TO CORAL REEFS

EXPLOITIVE FISHING

Exploitive fishing includes fishing practices that are unsustainable and damage the long-term health of fishery resources. As you have learned, certain types of corals and fish have symbiotic relationships, so both species require each other in order to thrive. Here are three of the main forms of exploitive fishing that affect reefs globally.

Overfishing

When fish are harvested from the ocean in large quantity and at a higher rate than they are able to replace themselves, or reproduce, they are overfished. In 2019, this is believed to affect more than 55% of the world's reefs. One of the main causes of overfishing is the trend over the past few decades away from small-scale, sustainable harvests toward larger and indiscriminate takes, which have been possible with evolving technologies. As an example of one indiscriminate fishing technique, purse seine nets catch everything within an area, including fish and other sea creatures, many of which are not targeted by the fishermen and will be thrown back, but may be dead.



Destructive Fishing

Sometimes the easiest way to catch fish can also be the most destructive. One way to catch fish destructively is with poison. This is usually done with a chemical like cyanide (but can be other chemicals like bleach), which is why it is commonly referred to as **cyanide fishing**. This type of fishing is done to stun and trap a fish and make it easy to catch; usually a diver will poison a small area or hole within a reef with the cyanide, which causes the target fish to slow down or stop moving long enough to be caught by hand and transferred to a tank or net to take back to shore. For larger fish, the poison can be metabolized, and the fish will survive, but smaller fish and all the coral polyps, which have come in contact with the cloud of liquid poison, will die. This practice is most common for catching fish for the aquarium trade, a \$4-5 billion industry. The majority of tropical fish comes from wild-caught stock as it is very difficult to breed tropical fish in captivity. Hawaii passed a legislative bill in 2019 banning trade in aquarium fish to protect their reefs.



Destructive fishing also includes a practice known as **dynamite** or **blast fishing**. This is done when fishermen find a school of fish or an area where fish are known to be. They drop a loaded charge of dynamite or homemade bomb into the water to detonate. The underwater shockwave stuns all fish within a range of a few meters and ruptures their swim bladders, which regulate their ability to float underwater. Most fish will float to the surface, where they can be scooped up by the fishermen, but others will also sink to the seafloor and die. The shockwaves will destroy much of the coral reef beneath or near the charge, leaving only rubble. Although the practice is banned globally, it is still very much a threat in some parts of the world.

