

LOCAL THREATS TO CORAL REEFS

PHYSICAL DAMAGE

Physical damage is just what it sounds like, damage to the coral structure through physical means. This happens in a variety of ways, all of which are human caused and nearly all of which are avoidable.

One source of physical damage comes from people touching the reef or corals, either accidentally or on purpose, while surfing, fishing or boating, diving or swimming.



Careless swimmers and divers can damage the coral reef by grabbing hold of the reef in order to stay in place when swimming or by walking on the coral reef. Fishermen looking for a good place to set their line may also choose to walk on the reef instead of remaining in their boats. Divers may accidentally graze the reef with their fins, and surfers may accidentally touch coral when they wipeout. People visiting a coral reef may try to collect pieces of coral as souvenirs for themselves or to sell to tourists. Coral pieces may be sold as jewelry or as pieces of home décor, but neither kind of coral collection is good for reef health.



Boat-sourced damage usually comes from boat anchors dropped overboard directly onto a reef. This can happen when people get close to a reef to fish or dive and don't pay attention to the reef location when they drop anchor. Heavy boat anchors can cause significant damage to corals.

Another type of physical damage is less direct but just as damaging. This type of physical damage comes in the form of marine debris. Marine debris is any type of trash that ends up in the ocean whether from land or from boats on the water. Lost or discarded fishing gear, such as nets or traps, is one form of marine debris. This marine debris gets caught on reefs where it is known to entangle fish and other creatures, some of which become trapped and die.

Marine debris also includes bits of floating trash, such as plastic waste floating on the surface of the ocean or plastic bags that get caught on the coral itself. This waste blocks sunlight from the zooxanthellae and doesn't allow for them to carry out photosynthesis. Plastic marine debris can break down over time into what is called microplastics. These pieces are so small that scientists have found evidence of corals ingesting microplastics, mistaking them for phytoplankton; studies are still ongoing as to whether the microplastics weaken or stress the corals over time, but it is unlikely they help since microplastics carry no nutrients and often host bacteria. It is estimated 8 million tons of plastic finds its way into the ocean yearly.

