

Major losses for Caribbean reef fish in last 15 years

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By combining data from 48 studies of coral reefs from around the Caribbean, researchers have found that fish densities that have been stable for decades have given way to significant declines since 1995. The study appears online on March 19th in *Current Biology*, a Cell Press publication.

"We were most surprised to discover that this decrease is evident for both large-bodied species targeted by fisheries as well as small-bodied species that are not fished," said Michelle Paddack of Simon Fraser University in Canada. "This suggests that overfishing is probably not the only cause."

Rather, they suggest that the recent declines may be explained by drastic losses in coral cover and other changes in coral [reef habitats](#) that have occurred in the Caribbean over the past 30 years. Those changes are the result of many factors, including warming ocean temperatures, coral diseases, and a rise in sedimentation and pollution from coastal development. Overfishing has also led to declines of many [fish species](#), and now seems to also be removing those that are important for keeping the reefs free of algae.

"All of these factors are stressing the reefs and making them less able to recover from disturbances such as hurricanes, which also seem to be occurring more frequently," Paddack said.

Scientists had previously documented historical declines in the

abundance of large Caribbean reef fishes that probably reflect centuries of [overexploitation](#). However, effects of recent degradation of reef habitats on [reef fish](#) had not been established before now.

In the new study, the research team compiled data on reef fish densities from 48 studies representing 318 reefs across the Caribbean from 1955 to 2007. Their analysis found that overall reef fish density has been declining significantly for more than a decade, at rates that are consistent across all sub-regions of the [Caribbean basin](#). Specifically, they show losses in fish density of 2.7 to 6 percent per year.

Paddack said her study, which involved a very large team of scientists from around the globe, should serve as a call to action.

"If we want to have [coral reefs](#) in our future, we must ensure that we reduce damage to these ecosystems," she said. "On a personal level, this may mean not buying wild-caught aquarium fish and corals, not eating reef fish species that are declining, taking care not to anchor on reefs, and reducing our carbon emissions to help control climate change. But importantly, we need to let lawmakers and resource managers know that we care about these ecosystems and we need to push for changes in how they are managed."

Source: Cell Press ([news](#) : [web](#))

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