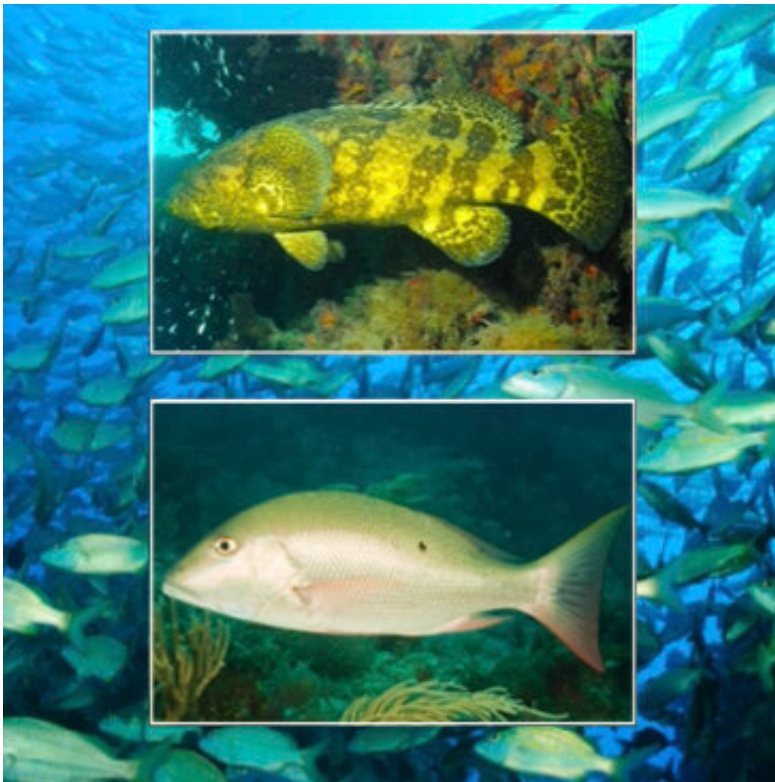


New research shows that 85% of coral reef fish studied are overfished

February 9 2022, by Diana Udel



Three out of the five grouper species (top), all eight snapper species (bottom), and two grunts (background) analyzed were below the 40 percent minimum spawning potential ratio, a regulation necessary to sustain fish populations.
Credit: Jiangang Luo

A new study led by scientists at the University of Miami (UM) Rosenstiel School of Marine and Atmospheric Science has found

concrete evidence that more than 85 percent of the grouper and snapper studied are overfished as a direct result of increasing human demand for seafood.

The research team analyzed 30 years of population data for 15 coral reef fish species central to South Florida's commercial and [recreational fisheries](#) using their length-based risk analysis (LBRA) framework.

They found that three out of the five grouper species, all eight snapper species, and two grunts analyzed were below the 40 percent minimum spawning potential ratio, a regulation necessary to sustain fish populations.

For black grouper, by increasing the current minimum catch size from 24 inches (61 cm) to 44 inches (110 cm), the spawning population would grow to 40 percent, large enough to produce a meaningful number of new juveniles. It would take approximately 10 years for the population to recover to a point where it was minimally sustainable and 22 years to reach equilibrium where a sustainable catch becomes possible.

"The situation is analogous to your [bank account](#)," said the study's lead author Jerald Ault, professor of environmental science and policy at the UM Rosenstiel School. "That is, without a significant account balance, in this case fish in the water, you can't get meaningful interest— significant numbers of large fish to catch, but also to spawn and replenish the reef."

The study, "Length-based risk analysis of management options for the southern Florida U.S. multispecies coral reef fish fishery," published in the journal *Fisheries Research*, provides a blueprint to effectively balance fishery production—how many fish are taken from the sea—to reduce overfishing and protect these valuable [fish populations](#) now and in the future.

More information: Jerald S. Ault et al, Length-based risk analysis of management options for the southern Florida USA multispecies coral reef fish fishery, *Fisheries Research* (2022). [DOI: 10.1016/j.fishres.2021.106210](https://doi.org/10.1016/j.fishres.2021.106210)

Provided by University of Miami

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