

Scaling up marine conservation targets should benefit millions of people

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Spanish flag *Lutjanus carponotatus* fishbase. Credit: Flickr user, pauljill

About 200 countries worldwide committed to protecting 10% of national marine areas by signing the Convention on Biological Diversity. But more ambitious marine reserve coverage policies that target unprotected

fishing grounds would benefit millions of people who depend on fisheries for food and livelihoods, argue the authors of an international study, publishing on January 5 in the open access journal *PLOS Biology*.

The research from Nils Krueck, Peter Mumby and colleagues at the University of Queensland, World Wildlife Fund, and the University of Melbourne makes the case for strict protection of 20-30% of fishing grounds, specifically where both biodiversity and [fisheries](#) are threatened.

The study has an explicit focus on otherwise unregulated fishing grounds. Previous research raised valid concerns that designating parts of the fishing ground for protection can reduce the value of fisheries when they are well managed. However, marine reserves are one of the few means of managing fisheries where conventional regulations, such as catch limits, are too difficult to enforce.

"Coral reefs in the south-east Asian Coral Triangle region typify the situation in which marine reserves can be an effective management tool. In much of the region, fisheries are highly diverse, overfishing is commonplace, and catches are largely unassessed and unregulated. Coral reef fisheries in particular should then benefit from closing 20-30% of fishing grounds because fish populations get a chance to recover and are then likely to support the export of young fishes from reserves to fished areas," said study author Dr. Krueck.

"Marine reserves alone will not be sufficient to solve the current fisheries crisis in the Coral Triangle," study co-author Professor Mumby said. "But our theoretic analysis of thousands of fisheries scenarios highlights that net declines in catches after more than 10 or so years of recovery should be rare."

"Enforcing [marine reserves](#) is a relatively simple management action,"

said Mumby, "but it is still a long way from the currently estimated 1-2% 'effective' protection on [coral reefs](#) to the recommended 20-30% strict no-take reserve coverage."

More information: Krueck NC, Ahmadi GN, Possingham HP, Riginos C, Treml EA, Mumby PJ (2017) Marine Reserve Targets to Sustain and Rebuild Unregulated Fisheries. *PLoS Biol* 15(1): e2000537. [DOI: 10.1371/journal.pbio.2000537](https://doi.org/10.1371/journal.pbio.2000537)

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