

# Sharks more abundant on healthy coral reefs

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Sharks in no-fishing zones in the Great Barrier Reef (GBR) Marine Park are more abundant when the coral is healthy, according to a study published September 10, 2014 in the open-access journal *PLOS ONE* by Mario Espinoza from James Cook University, Australia and colleagues.

Shark species that use [coral reefs](#) may be under pressure from fishing, habitat degradation, and climate change. The authors of this study were interested in understanding the factors that affect the distribution and abundance of shark populations in the GBR, including fishing and habitat quality. To examine the distribution patterns and habitat associations of sharks, the scientists used thousands of baited remote underwater video stations (BRUVS) across the entire GBR Marine Park over a 10-year period to record animals attracted to the bait, allowing them to count and identify any sharks present.

Overall, researchers recorded 21 different [shark species](#). The relative abundance of sharks was significantly higher in non-fished sites in the GBR Marine Park no-fishing zones relative to fished sites. However, their findings also showed that hard coral cover had a large effect on the abundance of reef-associated shark species, indicating that the success of marine reserves for sharks, particularly reef-associated species, may depend on coral reef health. "Our results suggest that healthy reefs make good shark habitat, and may be just as important for improving shark numbers as protecting sharks from fishing," Mr. Espinoza said. The study also showed that since the creating no-fishing zones in the GBR in 2004, some shark species found on coral reefs had increased, and that one particular shark, the grey reef shark, had increased in abundance since more of the reef became protected.

The authors hope that this study emphasizes how important the coral reef health is for the future of [shark populations](#), and that it may help others

better understand the role of reef health in assessing the benefits of marine-protected areas for [sharks](#).

**More information:** Espinoza M, Cappo M, Heupel MR, Tobin AJ, Simpfendorfer CA (2014) Quantifying Shark Distribution Patterns and Species-Habitat Associations: Implications of Marine Park Zoning. *PLoS ONE* 9(9): e106885. [DOI: 10.1371/journal.pone.0106885](https://doi.org/10.1371/journal.pone.0106885)

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