



Above: Silky sharks (pictured here in the Bahamas) were among the species being killed around the Cook Islands before marine biologist Jessica Cramp helped launch a sanctuary there. Now she's gathering data to evaluate if it's working. Previous page: Cramp free dives off Rarotonga, the largest of the Cook Islands.

information to make policies that protect them," Cramp says. "One of the reasons we're studying sharks is because they're in trouble, and we want to know if the laws we have in the Cook Islands work."

Before the sanctuary was created, a vessel could easily catch five or six sharks a day, says Josh Mitchell, who oversaw commercial fisheries for the Ministry of Marine Resources. His inspectors could smell ammonia, which seeps out of sharks' skin, as soon as they boarded a boat. Often the crew would sell the fins in parts of Asia where shark-fin soup is a delicacy.

When the zero-tolerance policy went into force in 2012, the inspectors were relieved, Mitchell says, because it left no room for interpretation. Since then four boats have paid a total of \$247,000 in fines (one lower fine was levied on a local boat).

A college professor once told Cramp that the best scientists spend their entire lives trying to disprove their own theories. So for three years Cramp has been crunching global data to evaluate whether large-scale protected areas like the one she helped design are keeping sharks alive. She hopes this information will help conservationists and lawmakers develop more effective policies. "I just know sharks are still dying within sanctuaries," says Cramp. "And if they don't work, then all the political will, all the kudos, all the momentum, is for nothing."

She's come to realize that even when the law seems absolute, there are gray areas. In multiple

instances Cook Islands authorities haven't fined a boat with shark parts on board because it was just passing through the nation's waters or had entered to request medical assistance.

Traditionally sharks were an animal guardian, a *taura atua*, to Cook Islanders. But to modern-day commercial fishermen, they're the competition. Fishermen lure their catch with devices that dangle under buoys a few miles offshore—but they also attract hungry sharks. This has become a battlefield for Cramp's conservation efforts. "The mentality here is, if you're getting sharked, go catch a shark," says a local skipper.

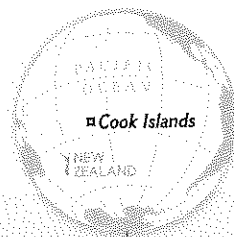
A few days before the camera-drop trip, Cramp stops by the port looking for bait. "You guys catching anything today?" she asks a group of fishermen gathered around a picnic table. "Seen any sharks?" The answer is no to both, but Cramp has heard that one of them recently killed a shark, and she confronts him. "It was messing with me!" he hollers back.

Cramp has a reputation in the port; fishermen call her the shark lady. She tries not to lecture this one about the kill—just say enough that it sticks in his head. "He will start to kill fewer sharks," she says, "because he'll feel bad."

On boat rides to place and retrieve the GoPros, Cramp's young helpers don't see any sharks to tag. The next day they watch the GoPro footage: fish sucking on the bait stick, eels battling in front of the camera. Two hours in, Cramp spots something circling in the background: "There's a shark!" High fives all around. "That was my camera drop," Rongo says proudly.

Cramp envisions someday passing her work on to a Cook Islander. Rongo and Smith, both high school seniors, are considering going to college for marine biology. "Instead of saying, 'I work in an office,' you'd be like, 'I'm a shark lady,'" Smith muses. "That'd be such a cool name to have."

Marine conservationist and shark researcher **Jessica Cramp** is a participant in the new partnership that longtime allies Rolex and National Geographic formed in 2017. Its motto, "Committed to a Perpetual Planet," reflects its mission: to promote conservation and exploration of Earth's oceans, poles, and mountains. Learn more at nationalgeographic.com/environment/perpetual-planet.



Cook Islands Sanctuary

In 2012 the Cook Islands became one of the world's 17 shark sanctuaries, which protect a collective 7.5 million square miles of ocean. Its regulations, including those listed at right, attempt to curtail the killing of sharks, estimated at tens of millions annually.

Forbidden Fishing

Bans vessels operating within the nation's exclusive economic zone from targeting sharks.

Fines

Levies a fine of \$73,000 to \$182,000 on any boat found with shark parts on board.

Wire Ban

Forbids trace wire, a type of fishing line that often ensnares sharks.