

GLOBAL SHARK CONSERVATION

SANCTUARIES FOR A PREDATOR IN PERIL





THE OPPORTUNITY

Swift, graceful, mysterious, superbly adapted to their environment, sharks have been the apex predators of the oceans since long before dinosaurs roamed the planet. For some 400 million years, they have been the unchallenged rulers of the deeps and shallows of the marine world.

No longer. They are falling victim to a fiercer predator that is threatening to end their long reign and driving them to the edge of extinction. That predator is us—people. In recent decades, human appetites, technology, economics, and greed have mounted a ferocious assault on sharks, an assault that is bringing their numbers crashing down throughout the world's oceans.

Killed for their fins, for their flesh, for their skin and other body parts; killed for sport and for souvenirs; killed by accident, sharks are now among the most threatened groups

of animals on Earth. Ironically, however, even though people are the principal threat to sharks, they also are their greatest hope.

The fate of sharks has broad implications. There is increasing evidence that the loss of sharks may have a ripple effect on the vitality of food webs in many areas of the global ocean. “They are our canary in the coal mine of the oceans,” said Dr. Boris Worm, a professor of marine biology at Dalhousie University in Nova Scotia.

Governments around the world are beginning to recognize the value of healthy shark populations. Some rely on the dollars sharks can bring through dive tourism; some see sharks as culturally significant to legend and tradition. Others are acknowledging that just as a healthy savanna needs its top predators to weed out the weak and infirm, so vibrant marine systems need

sharks. Recognizing this opportunity, The Pew Charitable Trusts initiated a campaign to reverse the decline of shark populations worldwide.

At the core of Pew's shark conservation efforts is its work to establish sanctuaries in the waters of key countries and stop the overfishing of sharks in places where they still stand a chance to rebound. Shark sanctuaries provide full protections for sharks in a country's exclusive economic zone (EEZ), the area of ocean that extends up to 200 miles from shore.

As the continued expansion of industrial fishing leaves few places in our oceans untouched, now is the time to protect these last remaining places where sharks can still rule their marine world.

—Jill Hepp
director, Pew global shark conservation



● Shark Sanctuaries ● Shark Trade Bans

Shark sanctuaries (blue dots) are areas with clear regulations that protect sharks from commercial fishing in a country's exclusive economic zone (EEZ). Since 2009, Pew's initiatives have been instrumental in securing 11.4 million square kilometers (4.4 million square miles) of shark sanctuaries around the world. Pew has also helped establish areas that ban the trade of shark fins (green dots). The New Zealand territory of Tokelau also declared its entire EEZ a shark sanctuary in 2011.

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PALAU

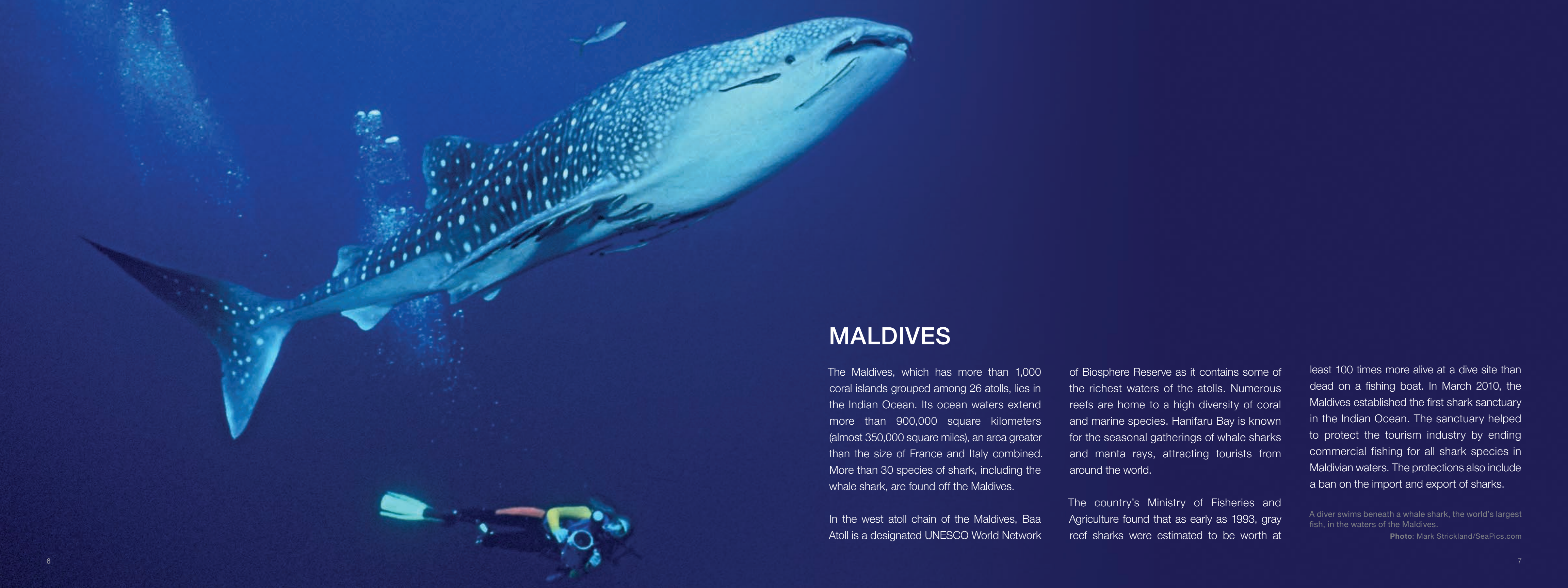
Lying southeast of the Philippines in the western Pacific Ocean, Palau is an archipelago of more than 586 islands and more than 600,000 square kilometers (230,000 square miles) of ocean, an area equal to the size of France. The Rock Islands Southern Lagoon in the state of Koror is recognized as a UNESCO World Heritage site. The high biological diversity of the area, including at least 13 shark species, is renowned for its exceptional conservation value.

Palau, with approximately 130 species of shark, is regarded as one of the top dive destinations in the world. The largest draw for tourists has always been the schools of reef sharks attracted to upwelling nutrients along the outer edge of reefs. A study by the Australian Institute of Marine Science found that divers spend US\$18 million a year to see Palau's sharks, accounting for 8 percent of the country's gross domestic product.

In September 2009, before the U.N. General Assembly, President Johnson Toribiong declared Palau's full EEZ a shark sanctuary, closing its waters to all forms of commercial shark fishing. The declaration was the first to protect all species of shark in a country's waters, and it became a model for all shark sanctuaries created in subsequent years.

The Rock Islands of Palau, also called Chelbacheb, formed millions of years ago from volcanic eruptions.

Photo: Norbert Wu/MindenPictures.com



MALDIVES

The Maldives, which has more than 1,000 coral islands grouped among 26 atolls, lies in the Indian Ocean. Its ocean waters extend more than 900,000 square kilometers (almost 350,000 square miles), an area greater than the size of France and Italy combined. More than 30 species of shark, including the whale shark, are found off the Maldives.

In the west atoll chain of the Maldives, Baa Atoll is a designated UNESCO World Network

of Biosphere Reserve as it contains some of the richest waters of the atolls. Numerous reefs are home to a high diversity of coral and marine species. Hanifaru Bay is known for the seasonal gatherings of whale sharks and manta rays, attracting tourists from around the world.

The country's Ministry of Fisheries and Agriculture found that as early as 1993, gray reef sharks were estimated to be worth at

least 100 times more alive at a dive site than dead on a fishing boat. In March 2010, the Maldives established the first shark sanctuary in the Indian Ocean. The sanctuary helped to protect the tourism industry by ending commercial fishing for all shark species in Maldivian waters. The protections also include a ban on the import and export of sharks.

A diver swims beneath a whale shark, the world's largest fish, in the waters of the Maldives.

Photo: Mark Strickland/SeaPics.com



HONDURAS

Honduras, located in Central America, is bordered by Guatemala, El Salvador, and Nicaragua. With coastlines on both the Pacific Ocean and Caribbean Sea, Honduras has an EEZ of more than 240,000 square kilometers (92,000 square miles), an area approximately the size of the United Kingdom.

The southern end of the Mesoamerican Barrier Reef, the second-largest barrier reef in the world, extends into Honduran waters and is home to more than 500 species of fish, including 40 species of shark. Off

the Caribbean coast of Honduras are the Bay Islands of Roatan, Utila, and Guanaja. Shark diving is popular in these areas, and Utila is known for its annual whale shark congregations.

In June 2011, President Porfirio Lobo Sosa signed legislation establishing full shark protections in Honduran waters, making permanent the country's 2010 moratorium on shark fishing. This was the first shark sanctuary to include both a Pacific and Caribbean coastline, as well as the first in the

Americas. With the sanctuary, Honduras also bans the possession, sale, import, and export of sharks and shark products. One year after the sanctuary was created, Honduras demonstrated successful enforcement of its shark protections with the burning of hundreds of confiscated shark fins.

A guard stands over hundreds of illegal shark fins confiscated by Honduran authorities in 2012.

Photo: Miguel Ángel de la Cueva/International League of Conservation Photographers



THE BAHAMAS

The Bahamas, a Caribbean archipelago off the coast of Florida, is made up of 700 islands and 2,400 cays with a span of ocean totaling more than 629,000 square kilometers (240,000 square miles), an area similar in size to Texas. Due to a ban on longline fishing gear in the 1990s, The Bahamas is one of the few locations in the Caribbean where relatively healthy populations of sharks remain. As a result, the country is the world's top destination for snorkeling and diving with sharks and claims the mantle of "Shark Diving Capital of the World." Shark-related tourism has contributed more than US\$800 million to the Bahamian economy over the past 20 years. Researchers and film crews flock there to mix with the more than 40 species of shark that live in its waters.

In 2010, Pew partnered with The Bahamas National Trust, a nonprofit organization, to advocate for permanent shark protections in the waters surrounding this tropical archipelago. Pew developed a major outreach effort that included school events, public meetings, and visits from renowned marine conservationist Pierre-Yves Cousteau, scientist and artist Guy Harvey, and "Sherman's Lagoon" cartoonist Jim Toomey. More than 5,000 Bahamians signed a petition, and hundreds of students drew their favorite shark to show the government their support for the shark sanctuary.

In July 2011, Lawrence S. Cartwright, the minister of agriculture and marine resources, established the shark sanctuary by prohibiting

the commercial fishing of sharks along with the sale, import, and export of parts and products.

After the sanctuary announcement, Pew organized a celebratory film tour featuring "Sanctuary: The Last Stand for Sharks." This short documentary, directed and produced by John Weller and Shawn Heinrichs, paints a picture of the global threats faced by sharks and recent protections established in The Bahamas. The campaign also created an educational manual on sharks for schools and held a workshop to train local agencies on how to enforce the sanctuary.

Tourism is the largest economic sector in The Bahamas. Many visitors come to dive with and watch sharks.
Photo: Stuart Cove's Dive Bahamas/www.StuartCove.com



THE MARSHALL ISLANDS

Made up of two nearly parallel chains of atolls and islands in the central Pacific Ocean, the Marshall Islands is one of four atoll nations and one of the most isolated places in the world. Some 1,225 islands and islets are spread throughout more than 1.9 million square kilometers (769,000 square miles) of ocean.

The Marshall Islands boasts some of the richest, most undisturbed marine ecosystems on the planet. As many as 30 species of shark swim in these waters, a place where many people consider themselves “RiBako,” or descendants of the shark.

In early 2011, Pew engaged with leaders and communities in the Marshalls to discuss

permanent protections for sharks. In partnership with the Marshall Islands Conservation Society, the campaign secured the support of the Marshall Islands Mayors Association and the Irooj, the islands’ hereditary traditional leaders.

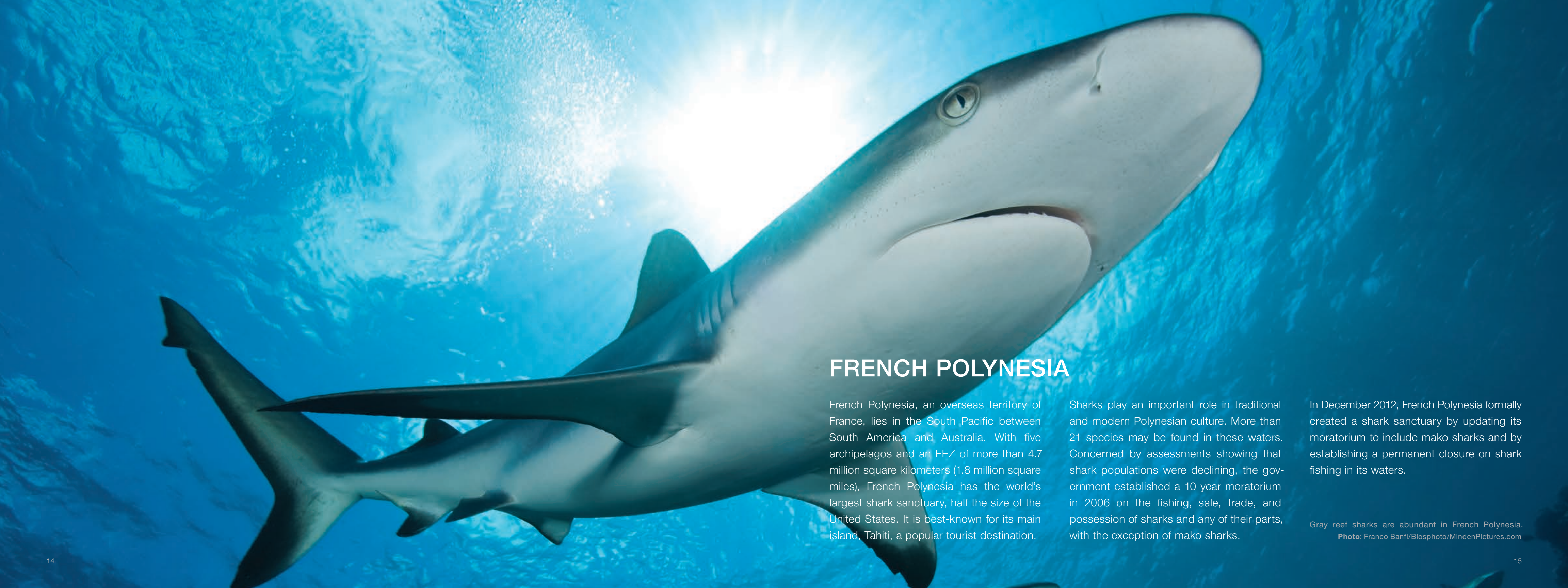
The Marshall Islands shark sanctuary was established in October 2011, creating the world’s second-largest protected area. It covers roughly the same expanse as Indonesia, Mexico, or Saudi Arabia, and is about eight times bigger than the United Kingdom. All commercial fishing of sharks and fishing gear used to target sharks are banned in the sanctuary, as is the export of shark fins. The Marshall Islands also set

some of the world’s highest fines for fishing vessels that violate the shark sanctuary law.

In the first year after the declaration, the Marshall Islands Marine Resources Authority successfully prosecuted four infractions and levied US\$235,000 in fines. Pew helped coordinate a marine enforcement workshop to increase capacity and improve collaboration among the government agencies responsible for marine protections.

Gray reef sharks, common in the waters of the Marshall Islands, are protected from commercial fishing by the island nation.

Photo: Shawn Heinrichs/Blue Sphere Media



FRENCH POLYNESIA

French Polynesia, an overseas territory of France, lies in the South Pacific between South America and Australia. With five archipelagos and an EEZ of more than 4.7 million square kilometers (1.8 million square miles), French Polynesia has the world's largest shark sanctuary, half the size of the United States. It is best-known for its main island, Tahiti, a popular tourist destination.

Sharks play an important role in traditional and modern Polynesian culture. More than 21 species may be found in these waters. Concerned by assessments showing that shark populations were declining, the government established a 10-year moratorium in 2006 on the fishing, sale, trade, and possession of sharks and any of their parts, with the exception of mako sharks.

In December 2012, French Polynesia formally created a shark sanctuary by updating its moratorium to include mako sharks and by establishing a permanent closure on shark fishing in its waters.

Gray reef sharks are abundant in French Polynesia.
Photo: Franco Banfi/Biosphoto/MindenPictures.com



COOK ISLANDS

In the South Pacific, halfway between Hawaii and New Zealand, a mix of coral atolls and volcanic islands make up the Cook Islands. The water surrounding the six islands in the northern group and nine in the southern group makes up an area of more than 1.9 million square kilometers (756,000 square miles), an ocean expanse the size of Mexico.

More than 15 species of shark can be found in the waters of the Cook Islands. Sharks are rooted in the culture of the

islands, and they are represented through the tale of Ina and Mango (the shark), which is depicted on paper currency and in images throughout the country.

The sanctuary is the result of a partnership between Pew and the Pacific Islands Conservation Initiative and the support of many local community and political leaders. Hundreds of signatures were collected on a local petition, and students submitted letters and drawings bearing the message

“Akono Te Mango” (Protect Our Sharks).

In December 2012, Teina Bishop, the minister of marine resources, announced the regulations prohibiting the commercial fishing of sharks throughout the EEZ. The regulations also ban the possession, sale, and trade of shark products.

A blacktip reef shark cruises above corals in the Cook Islands.

Photo: R. Holler/Tahiti Private Expeditions



U.S. TERRITORIES: NORTHERN MARIANA ISLANDS, GUAM, AMERICAN SAMOA

Three of the five U.S. territories are in the Pacific Ocean. The Northern Mariana Islands and Guam are in the western Pacific, south of Japan. American Samoa, which includes five volcanic islands and two atolls, is in the South Pacific.

In January 2011, the Northern Mariana Islands banned the possession, sale, and distribution of shark fins within three miles of the archipelago. It was the first law of its kind in a U.S. territory. To establish these shark protections, former fishermen and students worked side by side with the lieutenant

governor and commonwealth Rep. Diego T. Benavente.

Guam followed with a similar law in March 2011. Pew partnered with local high school students to advocate for passage of the measure by collecting signatures and providing oral and written testimony at a public Senate hearing.

In August 2012, American Samoan Governor Togiola Tulafono issued an executive order banning the take, possession, sale, and trade of sharks and shark parts. In October 2012,

American Samoa's fisheries regulations were amended to include this trade ban, as well as a ban on shark fishing within its territorial waters. This was the first territory to ban all take of sharks, creating the strongest shark protection measures of any U.S. state or territory. Pew led a concerted outreach effort in the community to build support for this conservation measure.

Students in Guam, above, rally for regional protection of sharks.

Photo: Angelo Villagomez/The Pew Charitable Trusts

Two oceanic whitetip sharks, left, swim in the temperate seas surrounding the U.S. Pacific territories.

Photo: Jim Abernethy

THE FUTURE: GLOBAL SHARK SANCTUARIES

Ending the overexploitation of sharks requires major regulatory changes and shifts in the way we think about our oceans. Many, if not most, shark fisheries remain essentially unmanaged, trade in shark fins and meat is largely unregulated, and demand for fins continues to grow. Despite the increasing number of protected areas, there are still only a few places where sharks can find sanctuary.

Many scientists and policymakers are calling for immediate action to conserve sharks at national, regional, and international levels. To do this, Pew believes we need a promising strategy for conserving sharks and other marine life by expanding the

number of sanctuaries where shark fishing is prohibited. The benefits are tangible, both for the environment and for local economies. Sharks are a key component of healthy coral reef systems and, particularly in places such as The Bahamas and Palau, where dive tourism is popular, sanctuaries bring in more dollars. Because of the growing interest in shark tourism in these places, a reef shark can add US\$1.9 million over its lifetime, far more than its value if it were killed for fins or other commercial purposes.

The Pew Charitable Trusts is leading a global movement to end the overfishing of sharks and to protect new and larger places around

the world where sharks can fulfill their role as a top ocean predator without peril. We partner with local government agencies, nongovernmental organizations, scientists, and other local stakeholders to establish shark sanctuaries. Within these partnerships, Pew draws on fact-based science, real solutions, training, and the information decision makers need to create effective conservation policies that protect sharks, and the thriving marine systems that need them if they are to be healthy far into the future.



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