

Earth Gets A Surge of New Ocean Sanctuaries

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A green sea turtle swims under Midway Island Pier at Papahānaumokuākea Marine National Monument. (Photo: [Greg McFall/NOAA](#))

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Earth is on the brink of a sea change. Its oceans are still mostly wild, without the obvious human footprint often seen on land, but they're also increasingly plagued by human-induced dangers such as climate change, overfishing and plastic.

Yet despite our inertia on many terrestrial issues like air pollution or deforestation, we're actually building some momentum for saving the seas. It's just a drop in the bucket so far, but the recent pace of ocean protection is promising nonetheless.

The past several years have brought a surge of new marine sanctuaries around the world, including sprawling reserves near [New Caledonia](#), [Hawaii](#) and [Antarctica](#) that each cover about 500,000 square miles. The nations of Gabon, Kiribati and Palau have all made waves with huge new refuges off their coasts, and the U.K. recently approved a 322,000 square-mile reserve around the [Pitcairn Islands](#). Conservationists are now working to string together an array of marine protected areas to establish the 30,000-island [Pacific Oceanscape](#).

World leaders set aside roughly 2 million square miles of ocean in 2016, a sizable increase from the previous record of 730,000 square miles protected in 2015. And much more could be in the offing, since the United Nations has set a goal of [protecting 10 percent of the ocean](#) as marine sanctuaries by 2020.

In honor of this trend — and in hopes it means tides are turning toward healthier aquatic habitats — here's a closer look at some of the areas being saved:

Mexico



Mexico's Revillagigedo Islands were designated a UNESCO World Heritage site in 2016 and a marine national park in 2017. (Photo: [Presidencia de la República Mexicana/Flickr](#))

It may be smaller than some other recently created marine reserves, but the Revillagigedo Archipelago off Mexico's west coast is now the largest ocean sanctuary in North America. Announced in November 2017 by Mexican President Enrique Peña Nieto, the protected area spans 57,000 square miles (150,000 square kilometers) of Pacific Ocean around the Revillagigedo islands, located nearly 250 miles (400 km) southwest of the Baja California peninsula.

The move prohibits all fishing activity, along with resource extraction and the development of new hotels on the islands. The area, which is centered around four volcanic islands, has been nicknamed "the Galapagos of North America" due to its unique geology and ecology. The islands lie at the convergence of two ocean currents, creating an oasis for hundreds of plant and

animal species, including whales, sea turtles, seabirds and about 400 species of fish. Many commercially valuable fish breed in the area, and the sanctuary — which will be patrolled by Mexico's navy — is meant to preserve them after years of unsustainable harvesting.

The move was quickly heralded by conservationists. "Revillagigedo, the crown jewel of Mexican waters, will now be fully protected thanks to the vision and leadership of President Peña Nieto," says Mario Gómez, executive director of the Mexican conservation group Beta Diversidad, in a [statement](#). "We are proud of the protection we will provide to marine life in this area, and for the preservation of this important center of connectivity of species migrating throughout the Pacific."

Antarctica



Adelie penguins at the Ross Sea in Antarctica (Photo: AndreAnita/Shutterstock)

An especially huge marine refuge was established in late October 2016, when 24 countries and the European Union struck a deal to protect 600,000 square miles of Antarctica's Ross Sea. That's about twice the size of Texas, and makes this the largest nature preserve anywhere on Earth. The move bans commercial fishing to protect the area's rich array of native marine life.

Sometimes called the "[Last Ocean](#)," the Ross Sea is one of the last stretches still relatively untouched by humans and undamaged by overfishing, pollution or invasive species, according to the Antarctic and Southern Ocean Coalition. It's home to a [wide range of wildlife species](#), including at least 10 mammals, half a dozen birds, 95 fish and more than 1,000 invertebrates.

Popular animal residents range from Adelie and emperor penguins to minke whales, orcas and leopard seals.

"The Ross Sea is widely considered to be the last great wilderness area on Earth and known as the polar 'Garden of Eden'," according to a [statement from the United Nations Environment Program](#) (UNEP). The agreement is impressive considering we live in a time of "strained political relations," as UNEP Patron of the Oceans Lewis Pugh said in a statement. Russia and China were holdouts until the very end.

United States



A Hawaiian gallinule wades through shallow waters in Papahānaumokuākea Marine National Monument. (Photo: UNESCO/Wikimedia Commons)

In September 2016, U.S. President Barack Obama unveiled the first [marine national monument in the Atlantic Ocean](#). The Northeast Canyons and Seamounts Marine National Monument will protect 4,913 square miles of marine ecosystems off the coast of New England from commercial activity and development. According to the White House, this includes "three underwater canyons deeper than the Grand Canyon, and four underwater mountains known as 'seamounts' that are biodiversity hotspots and home to many rare and endangered species."

The month before, Obama also established the [now second-largest ocean sanctuary on the planet](#): Hawaii's Papahānaumokuākea Marine National Monument, which was Earth's largest upon its

2006 creation by President George W. Bush. But as the popularity of protecting oceans has grown over the past decade, it had slipped to 10th-largest in the world — so Obama quadrupled its size in one fell swoop.

"[N]ew scientific exploration and research has revealed new species and deep sea habitats as well as important ecological connections between the existing monument and the adjacent waters," the White House explained. "Today's designation will expand the existing Marine National Monument by 442,781 square miles, bringing the total protected area of the expanded monument to 582,578 square miles."



Fish shelter under coral at Rapture Reef in Papahānaumokuākea Marine National Monument. (Photo: [Greg McFall/NOAA](#))

That expansion means Papahānaumokuākea is even larger than the nearby Pacific Remote Islands Marine National Monument, which took its own turn as Earth's biggest marine reserve after Obama expanded it in 2014. Papahānaumokuākea provides critical habitat protection for more than 7,000 species of wildlife. [That includes several endangered species](#) — such as Hawaiian monk seals, Laysan ducks, green sea turtles and leatherback sea turtles, among others — as well as the longest-living marine species on Earth, black coral, which can live for 4,500 years. Protecting this much ocean habitat also provides a buffer against ocean acidification, boosting the resilience of many species by giving them more space to adapt.

The move bans all commercial resource extraction — including commercial fishing and any future mining activity — although it still allows some recreational fishing, as well as the removal of wildlife for Native Hawaiian cultural practices. The area has salient cultural and historical significance, the White House noted, as much of the surrounding land and water is sacred to the Native Hawaiian community.

"The Northwestern Hawaiian Islands are home to one of the most diverse and threatened ecosystems on the planet and a sacred place for the Native Hawaiian community," U.S. Interior Secretary Sally Jewell said in a statement. "President Obama's expansion of the Papahānaumokuākea Marine National Monument will permanently protect pristine coral reefs, deep sea marine habitats and important cultural and historic resources for the benefit of current and future generations."

[Here's a glimpse](#) of how big Papahānaumokuākea is.

At the 2015 Our Oceans conference, the U.S. also unveiled a pair of much smaller preserves in Maryland and Wisconsin, which would be the first new U.S. marine sanctuaries in 15 years. They're tiny compared with Papahānaumokuākea, and may bend the technical definition of "marine," but both are teeming with historic shipwrecks as well as wildlife. Both were also nominated by the American public, part of a policy shift meant to boost engagement with federal conservation efforts.



Low tide reveals the hull of a sunken ship at Mallows Bay, Maryland. (Photo: Don Shomette/NOAA)

In Wisconsin, the [proposed sanctuary](#) spans 875 square miles (2,266 square km) of the Lake Michigan coastline, an area that contains 39 known shipwrecks, including 15 listed on the National Register of Historic Places. Archival and archaeological evidence suggests the area may also hold undiscovered shipwrecks, according to the U.S. National Oceanic and Atmospheric Administration (NOAA), which notes the proposal "received tremendous support from the community."

In Maryland, the [Mallows Bay-Potomac River](#) site covers 14 square miles of the tidal Potomac River, a valuable estuary located about 40 miles south of the nation's capital. Its shipwreck collection features nearly 200 vessels that range from the Revolutionary War to modern day, including the largest "ghost fleet" of wooden steamships built during World War I. It's also "a largely undeveloped landscape and waterscape identified as one of the most ecologically

valuable in Maryland," NOAA points out, "as the ship remains provide important habitat for fish and wildlife, including rare, threatened and endangered species."

Chile



Ancient moai statues loom over the coast of Easter Island, which has been plagued by illegal fishing. (Photo: Shutterstock)

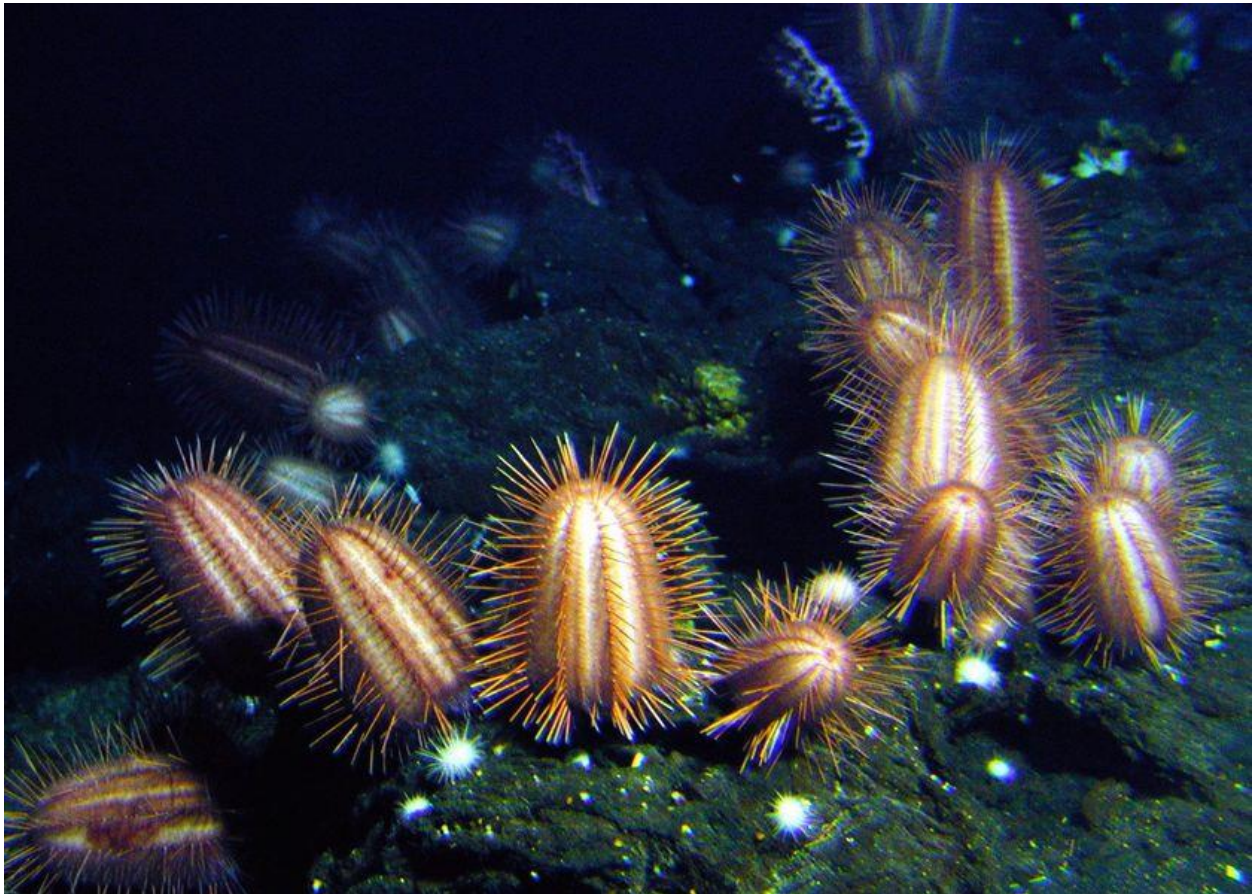
Also in late 2015, Chile introduced a new marine park spanning more than 243,000 square miles (630,000 square km) around Easter Island, located about 2,300 miles off the Chilean mainland. The area has been rife with illegal fishing lately, according to local anglers and environmental advocates, so a main goal of this preserve is to banish industrial trawlers while still allowing local, smaller-scale fishing near shore.

Unveiled by Chilean President Michelle Bachelet at Our Oceans 2015, the preserve will be the "third-largest fully protected area of ocean in the world," [according to the Pew Charitable Trusts](#). It has 142 native species, 27 of which are threatened or endangered. The park was proposed by Easter Island's indigenous Rapa Nui people, whose representatives [clapped and sang](#) after the announcement.

"World famous for its Moai statues, Easter Island will now be known as a global leader in ocean conservation," says Pew vice president Joshua S. Reichert, who leads the nonprofit group's environmental work. "This announcement is an important step toward establishing the world's first generation of great parks in the sea."

In addition to Easter Island, Bachelet also announced a marine reserve at the *Islas de los Desventurados* ("Unfortunate Islands"), located about 500 miles off Chile's coast. The volcanic islands are uninhabited by people, aside from one Chilean Navy unit, but they're an [important habitat for seabirds](#). The two parks combined will cover more than 1 million square km (386,000 square miles), Chilean officials say.

New Zealand



Deep-sea urchins grow from the seabed at an underwater volcano in New Zealand's Kermadec Arc. (Photo: NOAA)

Many of the biggest marine parks created in recent years are in the South Pacific, but there's always room for more. In September 2015, New Zealand Prime Minister John Key revealed plans to create one of the world's largest, stretching across 620,000 square km (240,000 square miles) [around the Kermadec Islands](#).

Located about 1,000 km (620 miles) northeast of New Zealand, the Kermadecs are considered a gem of biodiversity as well as geology. The island arc hosts several dozen varieties of whales and dolphins, 150 types of fish, and three of the planet's seven sea turtle species. It also includes the longest-known chain of underwater volcanoes and the second-deepest ocean trench on Earth.

Covering an area twice the size of New Zealand's landmass, the sanctuary would reportedly ban all fishing as well as any oil, gas or mineral development.

"The Kermadecs is a world-class, unspoiled marine environment and New Zealand is proud to protect it for future generations," Key told the U.N. general assembly in New York. "Creating protected areas will support not only our own fisheries, but those of our Pacific neighbors, adding to New Zealand's efforts to help grow Pacific economies through the responsible management of their ocean resources."

It's worth noting that marine reserves can't save the oceans alone, especially from global threats like warming and acidification. Even their effectiveness varies from place to place, depending on the capabilities of local law enforcement. But when managed well, they can buffer key biodiversity hotspots, giving wildlife more space while replacing poachers with [better-paying eco-tourists](#).

And amazing vacations are just the tip of the iceberg. As many world leaders now realize, ocean health is an economic priority as well as an ecological one.

"Our economies, our livelihoods and our food all depend on our oceans," Obama said in a video message at the 2015 Our Oceans conference, a theme echoed by Easter Island Mayor Pedro Edmunds Paoa.

"The ocean is the basis of our culture and our livelihood," Paoa said in a statement. "The Rapa Nui community is immensely proud of this marine park, which will protect our waters for generations to come."

Editor's Note: This story has been updated since it was first published in October 2015.
