

Tides of time

Phoenix Islands Protected Area in Kiribati, a new World Heritage marine site, is the largest marine protected area in the Pacific



Butterflyfish in the Phoenix Islands Protected Area.

SPOTLIGHT | Phoenix Islands Protected Area

Pristine Pacific atolls, still largely untouched by man, are nonetheless threatened by climate change

For some time now, the World Heritage Committee has sought to add marine sites, particularly Pacific island locations, to its World Heritage list of 911 properties. With the inscription of both Papahānaumokuākea in Hawaii and the Phoenix Islands Protected Area (PIPA) in Kiribati this summer, the committee seems to have embarked on an era of vast ocean protection.

The world's second-largest marine protected area (Papahānaumokuākea is third), PIPA is the biggest World Heritage site — about the size of California and 6,000 meters (19,000 feet) deep. It is the largest marine protected area in the Pacific and the region's first to include such huge areas of deepwater habitat. Of its 400,000 square kilometers (154,440 square miles), only 28 square kilometers are land. Its tiny islands, like all coral reef atolls in the Central and South Pacific, were seamounts, or underwater mountains, probably volcanoes, whose summits subsequently caved in. PIPA's 14 seamounts create a unique underwater environment. Because the deep sea is largely unexplored, PIPA safeguards species that have yet to be studied or even discovered. This makes it a distinctive addition to the 43 marine World Heritage sites.

Says Tukabu Terorako, PIPA's director: "It's great for a small island nation to have this inscribed, and we are

really proud. It gives a good example to other little countries." Another benefit, he says, will be its raised profile, which could generate investment to help keep it intact. "Those who have a passion in preserving marine species may be willing to assist us now that we are recognized as World Heritage," he adds.

This pristine archipelago suggests what reefs might have looked like 1,000 years ago, before humans left their mark. Part of what has kept it so immaculate is its isolation; until now, remoteness has been its best protection. The only way to get there is to charter a boat or private plane, or fly a scheduled airline to Fiji or Samoa, then cross thousands of miles of ocean, which takes days. Only one of its eight atolls (ring-shaped islets with central lagoons) is inhabited. The untouched quality of the site means that it can serve as a model for restoring other, less unspoiled coral ecosystems. It is home to 200 species of coral and 500 types of fish. A score of different migratory seabirds have so far been identified on its waters. PIPA's marine bionetworks support fauna that have vanished elsewhere in the Pacific, such as giant clams and coconut crabs, or threatened species like the green turtle and the hawksbill turtle. It also protects rare plants

with cultural and medicinal values that face extinction on more populated islands.

Kiribati, part of Micronesia, is an independent nation, 4,000 kilometers (2,500 miles) southwest of Hawaii. Its 33 coral isles are divided into three groups: the Phoenix Islands, the Gilbert Islands and the Line Islands. Located near the international dateline, it was the first country to celebrate the third millennium in 2000. Kiritimati (Christmas Island) was discovered by Captain James Cook in 1777. Robert Louis Stevenson visited in 1889; Charles Darwin published his theory of atoll formation after a stop-over aboard the Beagle. Some researchers say Amelia Earhart may have crashed in these reefs in 1937.

But Kiribati is also forecast to be among the first nations to be swamped by rising sea levels caused by global warming. "Climate change is certainly PIPA's biggest threat," says David Obura, the park's chief scientist. Obura first visited in 2000 and found the islands "unaffected by man." When he returned two years later, however, the coral-reef specialist was shocked at the change. Coral bleaching had greatly altered the reefs. Corals turn pale from warming sea-surface temperatures, a result of greenhouse gases and climate change,

and the greatest bleaching on record occurred in 2002. "Nowhere on the planet is safe from it," he says, "but PIPA is really in the hot seat for climate change."

The government of Kiribati has shouldered an ambitious program to preserve the Phoenix Islands. The nation boasts few natural resources other than fish and copra, the dried meat of the coconut. Yet it has exempted over 150,000 square miles of its territory from fishing, which normally provides half its tax revenue from the sale of permits. Instead, it plans to sign a "conservation contract" with the PIPA Conservation Trust, which was set up last year with the New England Aquarium in Boston and Conservation International of Washington, D.C. The trust will create an endowment to not only finance a management plan, but also reimburse the government for earnings it will lose by the establishment of "no-take" zones for fish. The trust is raising funds toward its target of \$13.5 million.

The project was inspired by forest concessions, where landowners are paid not to chop down trees. As long as the fish are untouched, the money remains in the trust, and Kiribati gets the interest. This "reverse fishing-license" scheme, the first of its kind, will compensate Kiribati annually for the missing income. Eventually, more than 25 percent of PIPA's entire area will be designated as no-take areas for fish.

First, the Tentative List

Nations that have signed the World Heritage Convention can produce a Tentative List of properties they are considering for future nomination to the World Heritage List. It is an important step, because no site can be considered for World Heritage Listing if it has not previously been included on a Tentative List, and also because it allows Unesco to anticipate sites that countries may want to submit one day. Tentative Lists contain the property's name, its geographical location, a brief description and justification of the outstanding universal cultural or natural value that might qualify the site for World Heritage. Nations may update them at any time. Of the 187 countries that are signatories to the World Heritage Convention, 166 have submitted a Tentative List. For more information, visit <http://whc.unesco.org>

J.J.

World Heritage marine conference held in Hawaii Dec. 1-3

Jaeger-LeCoultre's support for the Tides of Time program and marine World Heritage has in part made it possible for the site managers of Unesco's World Heritage marine properties to meet, for the first time, in an exceptional conference in Hawaii on Dec. 1-3. Jaeger-LeCoultre has, from its founding in 1833, aimed to find a balance between growth and respect for nature. Its environmental awareness has led it, since 2008, to be an active backer of Unesco's World Heritage Centre for the preservation of our marine legacy. These same principles have prompted Jaeger-LeCoultre to support the Honolulu seminar.

All 43 marine site managers have been invited. The meeting is co-organized by the National Oceanic and Atmospheric Administration Office's National Office of Marine Sanctuaries and co-sponsored by 10 organizations, including governments,

nongovernmental organizations and the private sector. A key focus of Unesco's World Heritage Marine Program is the promotion and exchange of ideas among its marine site managers. This event gives them the chance to share management practices that have made a difference at their locations, and to hear from others about conservation initiatives that have worked elsewhere and which they might want to try. The three-day symposium will mark the start of a stronger community among marine World Heritage site managers.

The conference will likewise allow marine scientists and site managers to explore the latest trends and cutting-edge breakthroughs that might be of use in protecting oceans. The results of the conference will become part of an action plan to chart new paths for marine World Heritage so it can play a bigger role in ocean conservation worldwide. J.J.

EXPLORING | Kiribati

Islands in the Pacific: Where the greatest adventure consists in getting there

Travelers equipped with oceangoing boats — and the ability to navigate those craft to a remote corner of the Pacific — can visit the Phoenix Islands Protected Area right now. They can dive lagoons and reefs almost untouched since European mariners first came across these mostly uninhabited landfalls in the 1820s, or sit alone on a beach and feel what it might be like to be the last person left on earth.

The rest of us will have to wait — the site is almost impossible to reach for those who can't pilot their own craft there. "At present, tourism within the PIPA is limited because of a lack of infrastructure and resources," says Melody Taylor, ecotourism officer for the Kiribati National Tourism Office. "We are designing a tourism strategy plan to promote tourism in an environmentally sound manner, with controlled numbers allowed entrance." Scuba, snorkeling and bird-watching will be among the activities eventually offered within the area. In addition, says Taylor, "the cultural background within this area demonstrates ancient Polynesian and Micronesian settle-

ment within the Pacific and would be of huge interest to any tourist interested in history."

Meanwhile, the rest of Kiribati is wide open for tourism. Air Pacific touches down at Kiritimati (Christmas Island) on a weekly service between Honolulu and Fiji; it also offers direct flights between Fiji and Tarawa, the capital. Air Kiribati provides regular service to other islands in the Gilbert Islands.

Scene of one of the bloodiest battles of World War II, Tarawa is rich in war relics that can be explored on one's own or with local guides. Sportfishing is probably the most de-

veloped of Kiribati's outdoor recreation options. A number of Tarawa and Kiritimati outfitters offer cruises in search of marlin, tuna, barracuda and other iconic game fish. The Betio Game Fishing Club in Tarawa sponsors fishing derbies throughout the year and also hooks up visitors with local fishing charters.

Kiritimati is known for having some of the region's best surfing. Two dozen breaks on the island's northwest shore are washed by waves that roll across the northern Pacific almost unimpeded, ranging from relatively modest swells that are perfect for neophytes to

10-footers best tackled by experts. The surf season is October to April. Christmas Island Surf Camp's weeklong packages include full board and daily boat transfers to the breaks. With the PIPA opening up, scuba has a bright future. Among the existing dive operators is Ocean Flower, which organizes local scuba trips in partnership with Kiribati Horizons. With its mix of tropical fish and sunken war relics, Tarawa Lagoon is the most popular dive spot. It's also possible to explore the underwater wonders of smaller islands scattered around Tarawa.

J.R.Y.

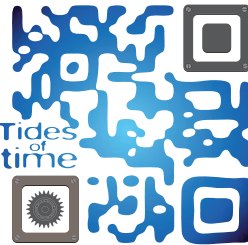
International Herald Tribune

THE GLOBAL EDITION OF THE NEW YORK TIMES

Visit the Tides of Time Web site for videos, interviews and more information on World Heritage marine sites: whc.unesco.org/tidesoftime/

Tides of time: Phoenix Islands Protected Area was produced by the IHT Creative Solutions department and did not involve the newspaper's reporting or editorial departments. It is the 22nd of a series on Unesco's World Heritage marine sites. The next installment, on Banc d'Arguin in Mauritania, will be published on Dec. 9. The series is a partnership among Jaeger-LeCoultre, Unesco's World Heritage Centre and the International Herald Tribune. Text by JOSHUA JAMPOL and JOSEPH R. YOGERST. For information on the IHT Creative Solutions program: www.nytimesglobal.com

Live the Tides of Time experience by scanning this QR Code with your smartphone. Be sure to first download a QR Code reader.



DUOMÈTRE À QUANTIÈME LUNAIRE.
Jaeger-LeCoultre Calibre 381.
The Dual-Wing concept is a genuine horological revolution featuring two distinct mechanisms synchronised by a single regulating organ. The patented jumping stop-seconds function enables time-setting to the nearest 1/6th of a second.
YOU DESERVE A REAL WATCH.

www.jaeger-lecoultre.com

