



# French Polynesians revive traditional rāhui to protect fish — and livelihoods

AMÉLIE DAVID

4 JUL 2024 FRENCH POLYNESIA INDIGENOUS PEOPLES AND CONSERVATION

[Comments](#)

[Share article](#)

- *In French Polynesia, fishing is of paramount importance. Many residents depend on fishing to feed their families and make a living.*
- *Confronted with a decline in fish stocks, communities across the country are reviving a traditional method of managing natural resources called rāhui.*
- *This bottom-up solution, managed by local communities with help from scientists and the government, although imperfect, appears to demonstrate some degree of effectiveness.*
- *The island of Tahiti currently counts 13 rāhuis, and more communities are establishing them as a way to fight poverty, sustain fishers' incomes, and regain their culture.*

[See All Key Ideas](#)

TAHITI — It's Mass Day in Fenua Aihere. There are no roads to this part of the island of Tahiti — it's only reachable by boat. It's Monday, not the typical day for Mass in a Catholic community in French Polynesia. But here, everyone is a fisher or the wife, daughter or son of one. And on Sundays, they all head to the market to sell their catch, either in Taravao, the nearest city, or across the island in Papeete, French Polynesia's capital.

Songs in Tahitian and French resonate inside the town's small concrete church. Everyone listens carefully to the deacon's speech, even though the temperature and humidity are nearly unbearable.

Fishers will head into the clear blue lagoon of Tautira municipality, but they must avoid the waters right off Fenua Aihere. Since 2018, 265 hectares (655 acres), about 10% of Tautira's lagoon, have been protected with a *rāhui*. This Tahitian word indicates an area of land or sea where it is forbidden to take any resources, and in some cases even to enter.

"I think it is a very good thing," says Célestin Tevarai, a fisher like his father and grandfather, who sits on a bench in the church's courtyard after the service, facing the blue lagoon. "It helps us protect the fish and to be sure that tomorrow our children will still be able to fish and feed themselves."

Communities across French Polynesia have been reviving *rāhui*, a traditional method of managing natural resources, to enhance depleted fish stocks and protect the marine environment. What little data exist suggest this bottom-up solution, managed by local communities with help from scientists and the government, is at least somewhat effective. Scientists and conservationists are now working to expand the system while helping communities iron out problems and concerns.

Firuu Amonaria stands under a tree, waiting for the evening Mass. She offers a large smile framed by long, white hair. She says she used to fish lobsters with her husband and sell them to support her family of five. Although she doesn't go out to sea as often as before, she says she has noticed benefits from the protection. "We're starting to see an increase in the number of fish and their size as well," Amonaria says. "So, I think we need to continue with the *rāhui*."



A buoy marks the Tautira *rāhui*, where fishing is prohibited. Image by Amélie David for Mongabay.

## Forbidden places

French Polynesia spans 4.76 million square kilometers (1.84 million square miles) of ocean, larger than the surface area of the EU. According to a recent [study](#), 1,301 fish species have been recorded there,

“We ended up in many places in Tahiti and other islands with lagoons completely, completely depleted of fish,” says Winiki Sage, president of the Federation of Associations for the Protection of the Environment – Te Ora Naho (FAPE). “As a result, those who don’t really have a salary, every month they have difficulty living. Hence the idea of restoring these marine protected areas called rāhui, which our ancestors had already established.”

This traditional method of managing natural resources was used throughout the Polynesian triangle before the arrival of missionaries and Europeans in the 18th century. Back then, rāhui had sacred connections and were put in place to establish a chief’s authority or for special occasions, such as a birth or death. Colonizers prohibited rāhui in some places and it gradually fell out of use. However, since the 1980s, a rāhui revival has been underway. “Nowadays the rāhui are connected to the local communities and used for ecological reasons. It’s no longer sacred and linked to the gods,” says Tamatoa Bambridge, an anthropologist and director of the Rāhui Center, which helps establish and monitor rāhui across French Polynesia.

Rāhui differ from typical modern marine protected areas (MPAs) in a few ways: Rāhui implement strict prohibitions that can be lifted periodically, whereas MPAs often allow fishing under certain conditions and generally allow people entry, but the rules are permanent. Rāhui are generally small and located in lagoons and so regulate small-scale commercial and subsistence fisheries, whereas MPAs can be larger and extend farther offshore and therefore can also regulate industrial-scale commercial fishing.

The island of Tahiti now boasts 13 rāhui totaling 5,680 hectares (14,035 acres), approximately 40% of its lagoon, according to a FAPE-led [report](#) supported by the Pew Bertarelli Ocean Legacy project of the Pew Charitable Trusts, a U.S. think tank. Twelve of these rāhui, including Tautira’s, are classified as regulated fishing areas and managed by the government Marine Resources Directorate, while one, in Teahupo’o, is managed by the Environmental Directorate. There are perhaps a few dozen rāhui across French Polynesia, and at least one in each of the five archipelagos, although there is no exact count.

The first modern rāhui was established on Rapa, an island in the Australes Archipelago, in the 1980s. This island, located very far south where many endemic species exist, is only reachable by boat — the trip from Tahiti takes at least two days. A group of scientists visited the island in 2014 to study the rāhui’s environmental effects. They [found](#) the fish biomass within the rāhui was 50% lower than that of Marotiri, a nearby uninhabited island, but 67% higher than all non-rāhui zones around Rapa.

“What we found from our biological data is very healthy communities, and we found more fish,” says Alan Friedlander, senior marine scientist for National Geographic, who led the research. “So that would suggest that that management strategy is effective.”



you're currently offline



Part of a 2019 ceremony near Tukuhora village in Anaa Atoll to signify the closure of the bonefish fishery for the months of March, April and May, under a rāhui. Image courtesy of Alexander Filous.



Public fish traps inside a rāhui in Anaa Atoll in the Tuamotu Archipelago of French Polynesia. Image courtesy of Alexander Filous.

## Surveillance issues

"*Tama'a maitai!*" says Ella Marere, Tahitian for *bon appétit*. Marere, a mother and grandmother, is having lunch with her family. Like others in Fenua Aihere, this multi-generational family relies on fishing for

you're currently offline

middle that remained closed. More than 50 fishers caught more than 1 metric ton of fish during the opening.

Marere and her family were impressed with the harvest after five years of protection. "The fish were quite big," Marere says. "I think it's important to open the rāhui from time to time, but not completely, and not permanently."

The rāhui was established in 2018, but monitoring occurred only in 2021 and 2023. The Center for Island Research and Environmental Observatory (CRIOBE), based on Mo'orea, the island facing Tahiti, oversees the monitoring. Early, as-yet unpublished results support Marere's impression, indicating that the rāhui has a positive impact on the number and sizes of various fish species. However, scientists say more research is needed to confirm its efficacy. "We can't be 100% sure," says Marguerite Tairui, a Ph.D. candidate at CRIOBE who also works at the Rāhui Center. "We only have trends at the moment, and we need to confirm those with long-term studies."

Eric Pedupebe, a fisher who belongs to the community committee that manages the Tautira rāhui, is happy that Fenua Aihere residents largely support it. But this has not always been the case. "We faced several problems when we set up this rāhui," Pedupebe says. "And not everyone was happy to see a rāhui set up; people were concerned about not being able to fish anymore and not making enough money to live. There was also the place chosen for the rāhui; at first they were not happy about it." Fishers whom Mongabay spoke with said the rāhui didn't change their livelihoods: They can fish outside the rāhui and make a decent living.

Today, the main concern is surveillance. Pedupebe and other Fenua Aihere residents say small-scale and subsistence fishers from the town and elsewhere come, mostly at night, to fish in the lagoon, violating the rāhui's rules.

Residents of Teahupo'o, a community on the opposite side of the Tahiti Peninsula that has had a rāhui since 2014, say the same thing. "I go into the rāhui myself with my boat during the night to ensure surveillance," says Denis Parker, a member of the Teahupo'o rāhui management committee. "But we lack resources. ... We need more authority to ensure surveillance." Offenders face a fine of 170,000 French Pacific Francs (\$1,500), but it is rarely imposed.

The various rāhui committees recently created a federation to coordinate and discuss their different practices and organizations. A key topic is how to ensure better surveillance in the lagoons.



you're currently offline



Eric Pedupebe, a member of the Tautira rāhui management committee, shows the rāhui from his boat. Image by Amélie David for Mongabay.



A family plays at a beach in Teahupo'o. Image by Amélie David for Mongabay.

## Teahupo'o, Tahiti's first rāhui

Teahupo'o's rāhui was the first established in Tahiti. It is also the strictest: It is forbidden to enter the rāhui at all, to fish, to dive or even to boat through. And since 2014, the management committee has never voted to open it, even partially. The rāhui covers more than 700 hectares (1,730 acres), approximately 5% of Teahupo'o's lagoon.



you're currently offline

famed Teahupo'o wave, an impressive — and dangerous — surfing spot. The Tahitian lives in Fenua Aihere, adjacent to the Teahupo'o rāhui, which allows fishing in a 50-meter (164-foot) band from the shore.

"I'm a Sunday fisher, meaning just to eat, not to go out and sell," Estall says. "The rāhui is in the right place and well considered since there are a lot of currents, so the fish are displaced [outside it]. ... And there are so many fishers that we need to protect our lagoon."

As in Tautira, many fishers tell Mongabay they are happy to see fish that are bigger and more abundant than before outside the rāhui. However, there is a lack of scientific evidence to confirm these observations. In 2019, the government commissioned an inventory of the rāhui, then five years old. The results, which Mongabay reviewed but are not public, were not promising. "The reserve effect and the large number of fish expected, sometimes even announced, are not observed, except for a small fringe of the rāhui. This observation concerns all species, not just commercial and edible ones, but also cryptic, territorial, or pelagic species. Fish are observed, including large ones, but their numbers are not significant," the inventory states. However, no follow-up has been done to see whether the results might have improved as the rāhui matures.



A view of the site being prepared to access the famed Teahupo'o wave for the 2024 Summer Olympic Games, photographed in April 2024. In 2014, the community of Teahupo'o set aside about 5% of its lagoon as a rāhui where fishing and entry are prohibited. Image by Amélie David for Mongabay.



The community's catch after a daylong opening of the rāhui on Rapa, an island in the Australes Archipelago of French Polynesia, circa 2011. Image courtesy of Eric Clua.

## A rāhui in every community

In some places, talks about establishing rāhui raise opposition among local fishers, often over fears of losing important income sources, as was the case in Fenua Aihere before the Tautira rāhui opened. That's what's happening now in Pā'ea, a city on Tahiti's west coast. Yet Tautira residents are discussing the possibility of opening more rāhui. And on the island of Bora Bora, a rāhui should be established this year after many years of talks.

FAPE recommends creating rāhuis across the country. "My dream is to see a rāhui in every community," says Sage. For him and other proponents, rāhuis are not just about managing natural resources, but also a way to reconcile people with their culture, a bond eroded by colonizers.

*Banner image: Musicians at a 2019 ceremony marking a three-month rāhui closure of the bonefish fishery in Anaa Atoll. Image courtesy of Alexander Filous.*

18 years on, how are sharks faring in French Polynesia's shark sanctuary?

Citation:

Galzin, R., Morgan, A., Philippe, B., Taiana, D., Benoit, E., Mireille, H., ... Marguerite, T. (2023). Review of fish fauna and recently conducted fisheries research in French Polynesia. *Fisheries Newsletter- South Pacific Commission*, (hal-04368986). Retrieved from <https://hal.science/hal-04368986>

FEEDBACK: Use [this form](#) to send a message to the editor of this post. If you want to post a public comment, you can do that at the bottom of the page.