

WORLD

WILDLIFE

ALONG CHILE'S COAST

Meet the men and women working to better their ocean-centered way of life

10 / AUSTRALIA'S WILDFIRE RECOVERY

44 / TREKKING IN NEPAL & BHUTAN



FALL
2023

20

Local leaders fight to protect a biodiverse island, its waters, and the way of life it supports.

28

Meet some of the women making Chile's fishing industry a bit more fair.



WWF is grateful to donors like the Forum for the Patagonian Sea, Oceans 5, the David and Lucile Packard Foundation, and The Pew Charitable Trusts, who have generously supported this work.



COASTAL CHILE

WHETHER FIGHTING FOR AN ANCESTRAL ISLAND OR FOR THEIR SHARE OF THE SEA'S BOUNTY, COASTAL PEOPLES ARE SPEAKING UP FOR NATURE AND BETTER LIVES.



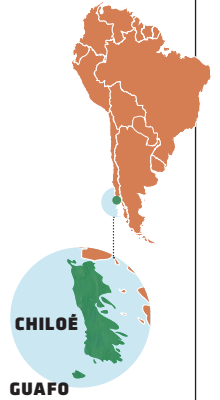
CHILOÉ
ISLAND

QUELLÓN

GUAFO
ISLAND

HOLDING FAST

Off Chile's Patagonian coast, Indigenous communities and WWF work to secure a marine treasure



PATRICIO COLIVORO stands barefoot on the gray sands of Guafo Island, an uninhabited, densely green haven off the southern coast of Chile. He's been sent here by his chief, or lonko, and seems grateful to be swaddled in a woolen poncho as the crisp Patagonian day breaks. Suddenly, thousands of sooty shearwaters burst free from the temperate rain forest above and stream out over the steel-blue waters of the Pacific Ocean.

As this avian freeway soars overhead, Colivoro blows a bleating welcome cry through a curved ox horn. It's a tradition among the Mapuche Huilliche (an Indigenous group in southern Chile) to offer respect. It's also a way, he says, of asking permission to visit Guafo, following the eight-hour boat journey from his home near the small coastal city of Quellón on the much larger island of Chiloé.

In the hours that follow, humpback whales arc in and out of waters off the coast of a popular fishing cove. Onshore lie the bones of an old whaling station where many Huilliche once worked. Magellanic penguins sport amid the melodic waves, and a pod of Peale's dolphins race just beyond. It's a vision of what the Huilliche-led coalition Colivoro represents is here to protect. As werken, or spokesperson, for his community, it's clear he is deeply committed to sharing the messages they want to convey.

STORY BY
**MARK
JOHANSON**



PHOTOGRAPHY BY
**MERIDITH
KOHUT**

ILLUSTRATIONS BY
**DANIELLA
FERRETTI**



NE SUCH MESSAGE? The urgency of defending Guafo Island and its waters. Under an initiative called Wafo Wapi, 10 Indigenous communities from Quellón, with the support of 11 local fishing unions, have petitioned the Chilean government to administer Guafo as an ECMPO (Espacio Costero Marino para Pueblos Originarios). This is a legally defined approach

that officially puts the administration of coastal areas under Indigenous management based on recognition of “customary use,” or how they’ve traditionally used the area’s resources.

The ECMPO designation would allow the communities to manage the sustainable extraction of resources and the continued health of this still-pristine environment, which

lies at the entrance to the Corcovado Gulf—one of the most important feeding grounds for cetaceans, especially endangered blue whales, in the southeastern Pacific. If successful, Wafo Wapi could offer an example for other Indigenous communities to follow—and provide a new model for how to balance human needs with coastal conservation around the world.

The idea to protect Guafo was born in 2016 following a massive red tide that blanketed seas across the greater Chiloé Archipelago. Local fishers blamed the algal bloom on the farmed salmon industry and the controversial dumping of thousands of tons of decomposing fish off the coast. Guafo was also under threat from coal mining and development; in 2020 the land was advertised for sale in the *New York Times* for \$20 million.

Colivoro’s community, Fundo Yaldad Mon Fen, began organizing in 2016. They studied Chile’s Ley Lafkenche,



ISOLATED AND ABUNDANT

Above left: Patricio Colivoro collects shellfish from the rocky shore of Chile's Guafo Island, where his community has fished, worked, gathered food, and worshipped for hundreds of years. **Top right:** Moving seafood from ship to shore at the small but bustling port in Quellón. **Bottom right:** A handful of Chilean abalones; Colivoro and other community members are careful to take only what they need. **Previous spread:** Manuel Vidal, captain of a fishing boat called the Cobra, supports efforts to manage and protect Guafo Island and its waters.

a unique law made by and for Indigenous communities that provides the framework for them to become legal guardians of the coastal environments they inhabit. Protests led by Colivoro's lonko, Cristian Chiguay, segued into a larger community organizing effort. Following several open-door meetings, nine neighboring lonkos signed on for the ECMPO initiative (see the list at right), and the Wafo Wapi partnership was born.

Since Ley Lafkenche came into effect in 2008, only 18 ECMPOs have passed the state's rigorous six-step application process, but if all goes to plan, Wafo Wapi could create one of the largest ECMPOs ever (870 square miles, including Guafo and great stretches of ocean) by the end of 2023.



THE WAFO WAPI ALLIANCE

Effective conservation requires both community engagement and engaged leadership, and the Wafo Wapi initiative benefits from both.

- 1 Lonko Ariel Henríquez Antilef
BARRIO COSTERIO HUIDLAD
- 2 Lonko Sixto Guaquel
COCAUQUE
- 3 Lonko Cristian Chiguay
FUNDO YALDAD MON FEN
- 4 Lonko Porfirio Chiguay
INKOPULLI DE YALDAD
- 5 Lonko Fernando Legue
ISLA CAILIN
- 6 Presidenta Jacqueline Gallardo
LAFQUEN MAPU LA BARRA DE CHAIGUAO
- 7 Presidenta Karen Chiguay
LAFQUEN MAPU SAN JUAN DE CHADMO
- 8 Lonko Sergio Mansilla
PIEDRA BLANCA
- 9 Presidente Homero Chiguay
RAYEN MAPU DE PUNTA WHITE
ISLA LAITEC
- 10 Lonko Ramón Chiguay
FOLIL TRINCAO



Colivoro, for one, is optimistic. He's convinced that it's only with the Huilliche community's stewardship that Guafo can remain as untouched as it is today. "Indigenous communities that don't forget their origins, that don't forget their cosmovision," he says, speaking of the Huilliche's spiritual worldview, "see the importance of nature and their role in it. And we know that if we damage it, we are only hurting ourselves."



THE AIR IN GUAFO wafts in waves of salt and umami—that is, until you cross paths with the sour funk of a sea lion colony, as Yacqueline Montecinos of WWF-Chile is doing while monitoring wildlife from a rubber Zodiac. Despite the smell, she beams, watching as sea lion pups bound down a rockslide like kids in a playground.

Montecinos, marine biodiversity and ocean policy coordinator, says WWF-Chile's interest in Guafo dates back to 2009, when the island was first identified as a priority for marine conservation.

"As we were developing the proposal for a Marine Protected Area, or MPA, our process of engaging with local stakeholders like the artisanal fishing community made us aware of local communities' parallel interests," she explains. "It turned out that more people than we knew wanted to protect this magical place! And that experience introduced the WWF team to the Wafo Wapi group.

"WWF's policy is that, if we encounter an Indigenous community initiative, we'll step back and evaluate how to move forward with them as a partner," she says. "Our goal is to support their conservation leadership and their initiatives."

For the Guafo initiative, "there was some initial skepticism from the communities," Montecinos acknowledges. "But over several months of dialogue, they were able to see how WWF might be a strategic partner with complementary objectives." So WWF took on an advisory role, helping with everything from scientific and technical support to communications, advocacy, and readying the ECMPO request for submission in 2018.

Chile's 4,000-mile coastline is rich in biodiversity thanks to the Humboldt Current, which is the largest upwelling system in the world's oceans. Fishing and aquaculture directly support some 300,000 people here and feed hundreds of millions more around the globe. (WWF—along with many partners—is working to make those industries more sustainable.) Even so, Guafo is unique.

Though the island has a total area of just over 80 square miles, with 47 miles of coastline, Montecinos says protecting it could have wide-reaching effects on the entire Corcovado Gulf, as well as the Patagonian fjords to the south, which face threats from overfishing, illegal fishing, habitat degradation, and industrial aquaculture.

"It's quite a strategic location for conservation well beyond the Guafo Island ECMPO," she explains. These waters, after



ALL HANDS

Opposite: Manuel Vidal (bottom left) helps haul a load of seaweed onto his boat. He says that the sea has been "overexploited" and adds that Indigenous communities and artisanal fishers need to work together to protect the shared resource. **Above:** An inspector measures a clam at the artisanal dock in Quellón.

all, are home to a vast number of migratory cetaceans—such as blue, humpback, southern right, sei, and killer whales—as well as the largest reproductive colony of sooty shearwaters in the world.



MANUEL VIDAL, captain of the fishing vessel *Cobra*, has the sturdy legs and weathered grin of a man who's sailed these waters for 40 years. He's visiting Guafo to extract luga, a leathery seaweed used for cosmetics and carrageenan (a thickening agent for the food industry). Citing the changing ecosystem, the Quellón native says he used to haul in 15,000 tons of seaweed in four days; now it takes a team of three divers about 10 days to harvest half as much, meaning they have to spend more of their lives living in the vessel's rudimentary shelter.

"I've seen this place when it was abundant with urchins, seaweeds, abalones, hake, and conger eels," he says, monitoring the long yellow hoses that carry oxygen to divers 30 ft. below. "That's not the case anymore."

Vidal and his crew are friendly with Colivoro and Elvis Chiguay (who, while not related to Lonko Cristian Chiguay, also represented Fundo Yaldad Mon Fen on the trip). In fact, they share a rapport that some might find surprising. ECMPOs can be a touchy subject in Chile, and not all fishing groups support the Indigenous-led approach.

All of this makes Wafo Wapi and the collaborative effort to protect Guafo and its waters even more special.

Wafo Wapi has the support of artisanal fishers like Vidal, who, in return, still have access to the island. “The sea has been overexploited,” Vidal explains, “so it’s clear you have to protect it.”

Colivoro says he hopes fishers like Vidal can keep coming back without fear that there will be ever fewer resources. “We need to learn to find an equilibrium in the economic activities, to not take and take again, so that you leave a bit for the next time around,” he says.

After visiting with the men on the *Cobra*, Colivoro and Elvis head ashore. It’s low tide, and the idea is to comb the coastal algae meadows to gather supplies for an evening meal back on the boat.

The men clamber around searching for locos (Chilean abalones) and lapas (limpets), prying the sea snails from exposed rocks with whittled sticks. They toss only the biggest ones into their hand-woven baskets, Colivoro says, “so there will be more for the next person.”

Up above is a primeval forest of towering coigües, bushy myrtles, and spindling olivillo trees—all bent sideways in the incessant breeze. At least 81 species of marine birds, including southern giant petrels and three types of cormorants, make their homes here, as do the scores of sooty shearwaters now filing in after a long day at sea.

“It would be great for our kids and grandkids to know one day that there were people who were worried about protecting this place,” says Chiguay, basket of lapas in hand, watching as the birds nearly blacken out the sunset in the skies overhead. “That there were people who, with little formal knowledge, tried to care for the environment for future generations.”

For now, a squat white Navy lighthouse on the cliff in the distance is the only sign of human intervention—other than five bold-colored fishing boats in the bay, which have moored together to form a floating city of sailors. Men onboard pass around gourds of hot yerba mate (an energizing tea). They cook stews atop wood-burning stoves, ready their mattresses, and prepare for the long cool of night.

Back on solid ground, in a rustic community center in Yaldad, near Quellón, Elvis Chiguay and Colivoro gather with Lonko Cristian Chiguay around a hole in the ground heaped with heated stones and covered with the giant leaves of nalca, a plant similar to rhubarb. The elders are preparing a curanto, one of the oldest continually practiced food traditions in the Americas, where meats, potatoes, and shellfish are all cooked in the earth.

The topic of their lunch meeting is protecting Guafo Island, an idea that was born in this very community center seven years ago. “This ECMPO was born because Western

culture so often looks at nature as a source of wealth to be sold,” Lonko Chiguay says, holding up a razor clam. “For us, the sea is a place of respect. We are always doing ceremonies to give thanks to the different ngen [nature spirits] who live there.”

From his spot at the center of the long, shared table, the lonko points to a mural on the wall. It shows how the sea is wrapped up in the spirituality of the Huilliche, whose cosmology includes a powerful serpent (Caicai) that controls the ocean’s equilibrium, as well as anthropomorphic spirits like a ruling sea lion (Millalobo) and fish-herding mermaid (La Sirena). These mythological creatures help rationalize the whims of the ocean—something that’s become harder to do in the face of pronounced changes such as the massive salmon and mussel farms now anchored in Yaldad’s harbor.

That’s why the community here, and the nine communities they have partnered with, hope their work might be seen as a model for other Indigenous groups defending both cultural and natural heritage.

“It’s an example of how First Nations can continue working to protect nature and do our part,” says Lonko Chiguay, “because a healthy sea means healthy people.”





BOUNTY AND BELIEF

Clockwise from above:
Few events symbolize the bounty of, and a community's connection to, the sea more than the ceremonial meeting and feast called a curanto. Lonko Cristian Chiguay opens the meal under the banner of the Huilliche people's flag. Abundant sea lion colonies thrive on Guafo Island's rocky shores.





MUJERES DEL MAR

A coalition of women work to advance their rights—and sustainable fishing—along Chile’s southern coast



AROLA BARRÍA strolls down a dock in Dalcahue, a bustling port city on the island of Chiloé, and chats with the grizzled fishing crews who’ve just hauled shellfish into the harbor on wooden boats. She listens to a litany of problems and racks her brain for solutions, clearly comfortable with the kind of gruff men who are accustomed to a fraternal life at sea.

Barría is the granddaughter, daughter, and sister of fishers—and none of them, she says, wanted her to follow in their footsteps. But, she adds, she never cared much about what they thought. Like many women, the 41-year-old helped support her family by collecting shellfish and seaweed from the



shore. But at the same time, she says, she was secretly studying—learning what she needed to know to rise through the ranks to become the secretary of both the local and regional fishing syndicates. More recently, she helped establish the National Corporation of Women in Artisanal Fisheries.

“When someone closes their eyes and thinks about fishing, they always visualize a man,” Barría says, returning to her spare office overlooking the harbor and its shuffling ferries. “That’s why we have this movement now. It’s so that women know they have rights too, and that it’s important for them to express their needs because being secondary actors, we’re never going to change anything.”

Barría played a key role in pushing through a 2021 national law that added gender equity to fishing policy. The law creates gender quotas in regulatory bodies and seeks to formalize formerly unrecognized (and traditionally female) roles that precede and follow the actual catching of fish—activities like smoking seafood products and baiting nets for fishing crews. Together, these changes let female workers appear on work registers and apply for grants to improve their businesses.

“Now,” Barría says, “women are absolutely empowered.”

WWF sees gender equity as a fundamental element of sustainable development and effective conservation, which is why the organization helped build momentum for the new gender equity law and supports leaders like Barría.

“Women have been made invisible in this sector for years, but they’ve always been a part of the story,” says Denisse Mardones, conservation communications coordinator at WWF-Chile, who joins Barría at the seafront near her office. “Now begins the whole process of implementing this law—and making sure we help these women gain greater participation in the decision-making about, and management of, artisanal fishing and small-scale aquaculture work. We need to secure financing for women’s enterprises and promote recognition of the health impacts of this work; we need to accomplish the vision of the law that recognizes the many roles women play in fisheries and aquaculture here.”

Barría tells Mardones she’s busy as ever organizing and training other female leaders across Chiloé to continue the fight for greater equity. “At the beginning, many husbands would tell their wives, ‘You need to be careful with her,’ because I’m breaking old traditions,” she says, raising an eyebrow. “But the truth is, we simply feel the freedom now to say the things we couldn’t before.”

The women she works with, including the four profiled here, have told her that they never felt important until they discovered the power of speaking up. “That,” she adds, “is what makes me most proud.”

REAL TALK

Carola Barría talks with fishers Gabriel Alamiro Oyarso and José Octavio Seron on their boat at the fishing port she manages in Dalcahue.



ROSA DE LOURDES HUENANTE ORTIZ

Before artisanal fisher Rosa de Lourdes Huenante Ortiz created the all-female syndicate Newen Antu in 2021, she was the only woman in an all-male group. “I was always looked at as inferior,” she recalls. There were, of course, other women in the coastal hamlet of Tenaún who worked in the seafood industry, mostly in sustainable seaweed and shellfish gathering. So, with some advice from Barría, she gathered 11 of them together. The goal: to bring their work out of the shadows.

“We’re working in parallel with, not against, the men, so we are not looking to compete,” she clarifies, pulling a tray of baked snoek, or pike, out of an oven at Camping Hospedaje Tenaún, the

ecotourism business she runs alongside her husband. “After all,” she adds, “we’re fighting for the same thing, which is the well-being of our families.”

De Lourdes’s cabins and campsites are perched just across from the town’s seafront. On the wall in the communal kitchen is a certificate from the local municipality honoring her role in empowering female fishers.

De Lourdes says she encourages women in her syndicate to add value to their raw products—principally by cutting out intermediaries. For example, in addition to serving food to tourists, she built a processing room last year. This allows her to clean and freeze conger eel, hake, pike, razor clams, and mussels, and sell them direct. “When we add value, we can make more money,” she says, noting she can earn four times as much for the same goods by preparing them for market. “So, I hope all of the women can reach the point where they can do this too.”



LUVY JARA & CRISTINA NANCUANTE

Shellfish collectors Luvy Jara Nancuante (lower photo) and her mother, Cristina Nancuante, invite Barría one evening for a stroll past the emerald waters of the Tocoihue Estuary. It’s dusk, and mother and daughter are digging along the coastline for mussels and razor clams. They exchange the daily gossip and then visit a seafront memorial to Nancuante’s late husband (Jara’s dad). Off in the distance are the hulking platforms of an industrial salmon farm; here in the estuary, the sea is calm.



CARMEN DIAZ

Pea-green hills emerge from a spectral fog as the small wooden fishing vessel *Albatross* sails east

from the pier in Chonchi, a port town roughly 25 miles south of Dalcahue. In the captain's chair is Carmen Díaz, president of one of the town's fishing syndicates, in which 90% of the members are men. Díaz is one of the only women on Chiloé to own her own boat, "but I hope it won't always be that way," she says, honking her horn in greeting to the fishers she passes.

Díaz anchors *Albatross* off the coast of a satellite island as her husband, Jaime Subiabre, wriggles into a thick wetsuit. Then, she readies an orange oxygen hose and checks the pressure gauge so Subiabre can dive in search of urchins, mussels, and octopus.

"The men here say that if a woman goes off in a boat, that boat will have bad luck," Díaz says, monitoring the slack on the oxygen hose and receiving the catch each time Subiabre

surfaces. "Believe me," she adds, "it's the exact opposite."

Díaz has worked alongside Barría in both regional and national organizations to empower other women to fight for things like gaining formal recognition and payment for their work as well as adding permitting processes to add bathrooms for women at the docks. "Thank God women are actually rising in the syndicates—and are guiding other women—because now we're fighting for our place," she says, "and we're starting to see the results."

One of her biggest messages is one of economic independence. "When you receive your own money, it's yours to spend," she explains. "I, for example, love to read, but I couldn't buy books before because my husband thought it was a waste of money. Now, I buy all the books that I want. It may sound insignificant to many people, but to buy my own books fills me with pride."



Nancuante says she first noticed outsiders poking around near Tocoihue back in 1990, so she went door to door with her daughter convincing neighbors to start a syndicate. The plan was to join together to protect these waters for the people who've subsisted on them for generations. "I've been fishing here since I was 16 years old, so I didn't want anyone to take this beach away from me," she says.

Three decades later, when she was in ailing health, Nancuante passed the torch to Jara, the current president of the syndicate, which has a membership of 10 women and five men. "I told my mom that I wasn't sure I wanted to be president, but she told me, 'If you aren't the president, my daughter, the syndicate will fall apart, and all of my sacrifices will be in vain,'" Jara recalls. "This was her dream, so I said as long as she's alive I'll make sure that the syndicate stays alive too."

