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FISH REFUGES: PROTECTING FISH, POWERING LOCAL ECONOMIES

Thirteen years after small-scale fishers in Mexico took the bold step of protecting parts of their waters, the results are impressive. Fish are bigger and more abundant, and catches are more reliable. Scarce species are returning and marine life is beginning to thrive again. For the communities that led the way – and the groups that supported them – it's proof that the sea gives back when fishers are trusted to care for their own ocean.

Organizations like Sociedad de Historia Natural Niparajá (Niparajá) and Comunidad y Biodiversidad (COBI) work at the intersection of community-led conservation and fisheries management. Their groundbreaking

efforts to establish networks of fish refuges – marine zones protected from fishing to allow fish populations to recover – have become a model for nature-based solutions that support healthy ecosystems and sustain community livelihoods.

The idea for fish refuges in Mexico emerged in the late 2000s in small-scale fishing communities along the coastline between Loreto and La Paz in Baja California Sur. These were small, tight-knit communities, deeply reliant on fishing for food and income. Local fishers were worried about illegal fishing practices that were depleting resources and a limited ability to safeguard the waters they depended on. At the same time, similar ideas were taking shape elsewhere: Thailand, Malaysia and the Philippines were experimenting with their own type of fish refuges.

“What we heard over and over again is: We are fishers, and we want to continue to fish – but we’re worried about the future of fishing,” says Amy Hudson Weaver, currently a consultant and a longtime collaborator with Niparajá and COBI.

agencies, the first official network of fish refuges in Mexico was established in 2012. Eleven zones were voluntarily closed to fishing for five years – an unprecedented move driven by local initiative, not by regulation.

That community involvement has been crucial.

“You can’t just parachute into a community, design a project and leave,” says Stuart Fulton, COBI’s director of development. “You need to trust the fishers and the communities, and they need to trust you.”

Niparajá and COBI trained local fishers and their family members as underwater and on-land monitors, equipping them to track changes in fish populations and document catch data – information that had never been systematically collected before.

“It became a huge project with fishers,” says Weaver. “We were training people to monitor the catches, to count what they caught, to monitor the different species being caught. We were able to establish a baseline and understand changes over time to see if it was working.”

In 2017, when the first five-year period ended, the communities decided to renew all the original refuges. They even expanded some areas and added new ones. In 2022, additional adjustments were made to further strengthen the network. Recently, Mexico’s federal government announced plans to more than triple its fish refuge zones by 2026, recognizing the power of these community-led efforts to achieve national conservation goals.

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The result in Mexico was an effort by COBI and Niparajá to help fishers co-design a legal framework for fish refuges – areas where fishing would be temporarily prohibited to protect habitats, like fish breeding and nursery grounds. After years of grassroots organizing and collaboration with government



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WHAT MAKES THE PROJECT PARTICULARLY INSPIRING IS ITS GENERATIONAL IMPACT.

The success of the fish refuges has spurred other communities around Mexico and the Caribbean to call for their own protected marine zones, and to ask groups like Niparajá and COBI for help with the process. Yet as Fulton emphasizes, the most effective ambassadors for the new sites are fishers who have seen what communities with fish refuges can accomplish together.

"Fishers with current fish refuges have been key in communicating to new sites the benefits of refuges, how to design them and how to operate them effectively," says Fulton. "They've really bought into the process." What makes the project particularly inspiring is its generational impact. Community members who were children when the early refuges were first established are now young adults, aspiring to join dive teams and continue conservation work. The concept of marine protection

has become embedded in the local identity – not as something imposed from the outside, but as a community-driven solution.

"These kids have grown up with the fish refuges since they were 8 years old, and now they're in their 20s – and they're like, when I grow up, I want to be part of the dive team [monitoring the refuges]," says Weaver. "This conservation culture is built into the community."

By closing these areas to fishing for a short time, with the support of fishing communities, the ocean has bounced back. The fish targeted by the fishers are increasing in number and getting bigger. The health of the ecosystem is improving, and the productivity of the fisheries is too. Today, the fish refuges are more than protected waters; they are living proof that communities can safeguard their livelihoods and leave a healthier ocean for the next generation.